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# COVID-19 AND DRUGS: IMPACT OUTLOOK

WORLD DRUG REPORT 2021

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ISBN: 9789211483611
eISBN: 9789210058032
United Nations publication, Sales No. E.21.XI.8

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Suggested citation:
*World Drug Report 2021* (United Nations publication, Sales No. E.21.XI.8).

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# PREFACE

Drugs cost lives.

In an age when the speed of information can often outstrip the speed of verification, the COVID-19 pandemic has taught us that it is crucial to cut through the noise and focus on facts, a lesson that we must heed in order to protect societies from the impact of drugs.

Drug use killed almost half a million people in 2019, while drug use disorders resulted in 18 million years of healthy life lost, mostly due to opioids. Serious and often lethal illnesses are more common among drug users, particularly those who inject drugs, many of whom are living with HIV and Hepatitis C.

The illicit drug trade also continues to hold back economic and social development, while disproportionately impacting the most vulnerable and marginalized, and it constitutes a fundamental threat to security and stability in some parts of the world.

Despite the proven dangers, drug use persists and, in some contexts, proliferates. Over the past year, around 275 million people have used drugs, up by 22 per cent from 2010. By 2030, demographic factors project the number of people using drugs to rise by 11 per cent around the world, and as much as 40 per cent in Africa alone.

There is often a substantial disconnect between real risks and public perception. In some parts of the world for example, cannabis products have almost quadrupled in potency, and yet the percentage of adolescents who perceive cannabis as harmful has dropped by as much as 40 per cent, despite the evidence linking regular use to health problems, particularly in young people, and despite the correlation between potency and harm.

New psychoactive substances also continue to be a challenge, as markets witness the introduction of new drugs that are unpredictable and poorly understood. Regulatory and legislative steps have been successful in stemming the tide globally, but in low-income countries the problem is on the rise; between 2015 and 2019, South and Central America recorded a fivefold rise in the amount of new synthetic psychoactive substances seized, while seizures in Africa increased from minor to substantial amounts. Strong increases were also reported in South and Southwest Asia as well as the Near and Middle East.

Meanwhile, the COVID-19 crisis has pushed more than 100 million people into extreme poverty, and has greatly exacerbated unemployment and inequalities, as the world lost 114 million unemployment and inequalities, as the world lost 114 million jobs in 2020. In doing, so it has created conditions that leave more people susceptible to drug use and to engaging in illicit crop cultivation.

Furthermore, disparities in access to essential controlled medicines around the world continue to deny relief to patients in severe pain. In 2019, four standard doses of controlled pain medication were available every day for every one million inhabitants in West and Central Africa, in comparison to 32,000 doses in North America.

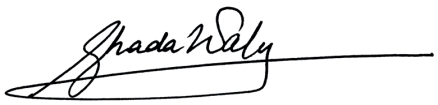
In parallel, drug traffickers have quickly recovered from the initial setback caused by lockdown restrictions and are operating at pre-pandemic levels once again. Access to drugs has also become simpler than ever with online sales, and major drug markets on the dark web are now worth some $315 million annually. Contactless drug transactions, such as through the mail, are also on the rise, a trend possibly accelerated by the pandemic.

Communicating facts about drugs and promoting science-based interventions is an absolute necessity if we are to reduce demand and supply of drugs, while also facilitating access to controlled medicines for those in need. It is also the surest path to eliminating stigmatization and discrimination and providing adequate treatment, as seven in eight people who suffer from drug use disorders remain without appropriate care.

At the UN Office on Drugs and Crime we are dedicated to pursuing and promoting fact-driven, human rights-based approaches to drug control and treatment.

I am proud to present to you this World Drug Report, which embodies our commitment to raising awareness and combating misinformation.

It is my hope that this report will inform policymakers, practitioners, and the general public on the facts of the world drug problem, and provide them with a powerful tool to share evidence and information, and in doing so help save and preserve lives.



Ghada Waly, Executive Director
United Nations Office on Drugs and Crime

# WORLD DRUG REPORT 2021

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## Acknowledgements

The *World Drug Report 2021* was prepared by the Research and Trend Analysis Branch, Division for Policy Analysis and Public Affairs, United Nations Office on Drugs and Crime (UNODC), under the supervision of Jean-Luc Lemahieu, Director of the Division, and Angela Me, Chief of the Research and Trend Analysis Branch, and the coordination of Chloé Carpentier, Chief of the Drug Research Section.

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The *World Drug Report 2021* benefited from the expertise of and invaluable contributions from UNODC colleagues in all divisions and from the INCB Secretariat.

The Research and Trend Analysis Branch acknowledges the invaluable contributions and advice provided by the *World Drug Report* Scientific Advisory Committee:

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# EXPLANATORY NOTES





The designations employed and the presentation of the material in the *World Drug Report* do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Countries and areas are referred to by the names that were in official use at the time the relevant data were collected.

Since there is some scientific and legal ambiguity about the distinctions between "drug use", "drug misuse" and "drug abuse", the neutral term "drug use" is used in the *World Drug Report*. The term "misuse" is used only to denote the non-medical use of prescription drugs.

All uses of the word "drug" and the term "drug use" in the *World Drug Report* refer to substances controlled under the international drug control conventions, and their non-medical use.

All analysis contained in the *World Drug Report* is based on the official data submitted by Member States to the UNODC through the annual report questionnaire unless indicated otherwise.

The data on population used in the *World Drug Report* are taken from: *World Population Prospects: The 2019 Revision* (United Nations, Department of Economic and Social Affairs, Population Division).

References to dollars ($) are to United States dollars, unless otherwise stated.

References to tons are to metric tons, unless otherwise stated.

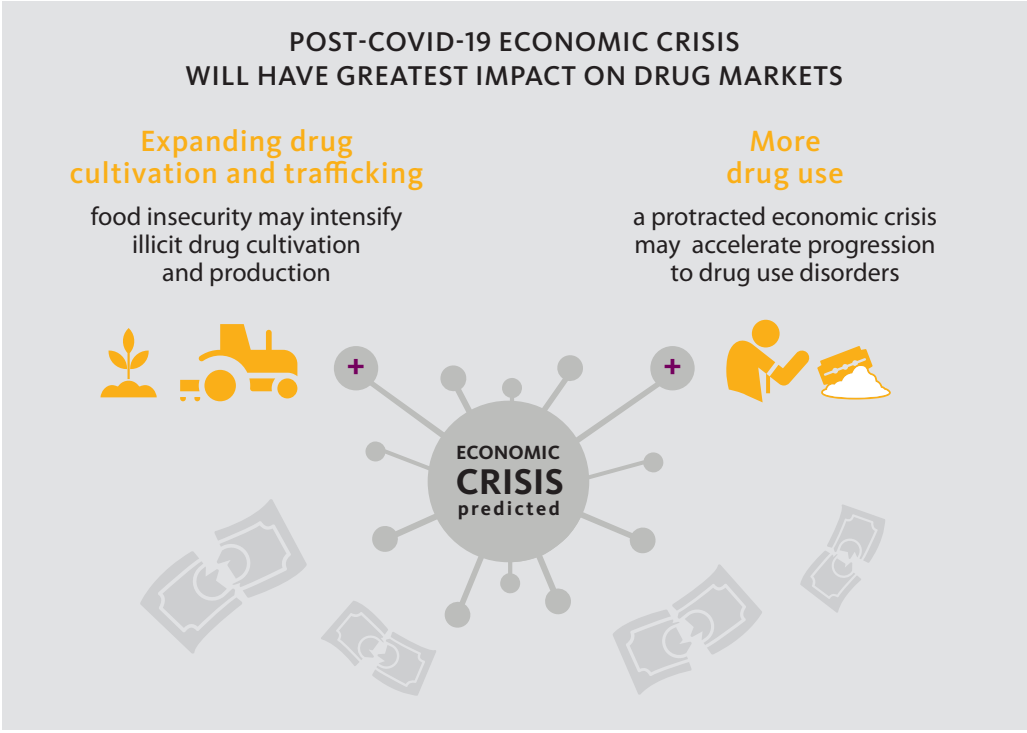
The following abbreviations have been used in the present booklet:

| | |
|---|---|
| CARICC | Central Asian Regional Information and Coordination Centre |
| CBD | *cannabidiol* |
| CRIMJUST | global programme on strengthening criminal justice cooperation along trafficking routes |
| DEVIDA | National Commission for Development and Life without Drugs of Peru |
| EMCDDA | European Monitoring Centre for Drugs and Drug Addiction |
| Europol | European Union Agency for Law Enforcement Cooperation |
| GBL | gamma-butyrolactone |
| GHB | gamma-hydroxybutyric acid |
| INTERPOL | International Criminal Police Organization |
| LSD | lysergic acid diethylamide |
| MDMA | 3,4-methylenedioxymethamphetamine |
| NPS | new psychoactive substances |
| PPE | personal protective equipment |
| *alpha*-PVP | alpha-pyrrolidinovalerophenone |
| PWID | people who inject drugs |
| global SMART programme | global Synthetics Monitoring: Analyses, Reporting and Trends programme |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| UNODC | United Nations Office on Drugs and Crime |
| WHO | World Health Organization |

# SCOPE OF THE BOOKLET

Constituting the fifth part of the *World Drug Report 2021*, the present booklet contains an early assessment of the impact of the COVID-19 pandemic on drug markets, as the situation continues to evolve and more data become available. The aim is to paint a comprehensive picture of the measurable effects and potential impact of the COVID-19 crisis to assist Member States in anticipating and addressing challenges that may arise in the near future.

The booklet contains an analysis of how the pandemic has affected drug production, manufacture and trafficking, according to region and drug type. This is followed by an analysis of the most recent trends and patterns in drug trafficking and the distribution of drugs at the retail level, including on the clear web and the dark web. The booklet also contains an analysis of how the COVID-19 pandemic and the measures to contain it have affected drug use and patterns of drug use, possible health consequences for drug users and how the provision of treatment and services to people who use drugs has been affected; a number of innovations in this area, which stem from the reaction to the pandemic, are described. The booklet concludes with an overview of the potential for long-term changes to drug markets as a result of the pandemic.



# IMPACT OF THE COVID-19 CRISIS ON DRUG MARKETS AND DRUG SERVICE PROVISION





The coronavirus disease (COVID-19) crisis has taken its toll on public health, the global economy and our way of life. Since the beginning of 2020, the world has experienced an unprecedented public health emergency that has caused a dramatic loss of human life[1] and led many nations to introduce measures to contain the spread of the virus. These measures have affected almost all aspects of daily life, from freedom of movement to how and where free time is spent and how work is organized.

Because drugs are trafficked clandestinely among streams of legal commerce and goods and distributed surreptitiously through the routine activities of citizens, illicit drug markets[2] rely on a functioning licit economy. The fact that drugs are often used in social settings such as bars and clubs means that their consumption is also dependent to a significant extent on the service industry and opportunities for people who use drugs to do so together. Therefore, the fundamental changes in the social and economic activities of societies resulting from the restrictions on mobility and social distancing measures introduced by Governments to contain COVID-19 have the potential to affect drug supply, distribution and demand in different ways.

Mobility restrictions and social distancing measures introduced during the pandemic have been heterogeneous across countries in terms of duration, intensity and timing, as have been the effects of those measures on drug markets.[3] Across all regions, disruptions and changes in drug production, distribution and use and in the delivery of services and treatment to people who use drugs have been documented.

1 For latest numbers on COVID-19, see WHO, "WHO coronavirus (COVID-19) dashboard". Available at https://covid19.who.int/.

2 The term "drug market" relates to an economic system where different actors interact to produce (cultivate, manufacture), sell and buy drugs. Drug markets are typically driven by the dynamics of drug supply and demand.

3 Luca Giommoni, "Why we should all be more careful in drawing conclusions about how COVID-19 is changing drug markets", *International Journal of Drug Policy*, vol. 83 (2020); Eric Halford and others, "Crime and coronavirus: social distancing, lockdown, and the mobility elasticity of crime", *Crime Science*, vol. 9, art. No. 11 (July 2020).

Data and qualitative information available to UNODC as of the first quarter of 2021 reveal that different dynamics emerged after the onset of the pandemic, with some drug markets experiencing no change and others quickly recovering after initial disruptions or undergoing opportunistic changes in routes and modi operandi. The pandemic has also had a differentiated impact on drug use patterns and the delivery of services, varying by country and drug type.

Overall, drug markets have largely proved to be resilient to COVID-19-related changes. After initial disruptions early in the pandemic, organized crime groups quickly adjusted to the changing circumstances, and by early 2021, drug trafficking appeared to be continuing at the same pace as before the COVID-19 pandemic or even at an increased pace.

The COVID-19 pandemic brought new trends in drug trafficking and accelerated some existing ones: an increased use of maritime and water routes was observed in many regions, including in countries in Europe, Latin America, North Africa and South-East Asia. These shifts may have been initiated or accelerated by border closures and difficulties in trafficking by land, as well as by the reduction in commercial flights.

After an initial decrease – following the onset of the pandemic – in trafficking of some drugs, such as cocaine in transit countries close to the Andean region and heroin along some parts of the Balkan route, trafficking re-emerged, with an increase in the size of intercepted shipments in many regions. During the pandemic in 2020, several record seizures were recorded, for example, several seizures of more than 10 tons of cocaine in Western Europe. This increase in shipment size was observed in many regions, for example, Europe, Central, South-West Asia and South-East Asia, and West and Central Africa.

The COVID-19 pandemic led to shifts in drug use: overall, MDMA, LSD and cocaine were used less due to the closing of social and recreational venues; increased stress, boredom, more free time and changes in financial resources triggered an increase in the use of cannabis, as well as in the non-medical use of pharmaceutical drugs

## Data and limitations

The aim of the present booklet is to provide a comprehensive picture of the measurable effects and potential future impact of the COVID-19 crisis in order to assist Member States in addressing them in a proactive way.

The research is based on the information made available to UNODC up to early 2021, namely, information provided by Member States to the UNODC global call for contributions on the impact of the pandemic, qualitative information collected by its global research network through meetings and structured and semi-structured interviews collecting expert perceptions, and the observations of key informants in selected areas.

The research is based on the following:

- Reports by 81 Member States provided to the UNODC global call for contributions on the impact of the COVID-19 pandemic on drugs and crime
- Information collected by the UNODC global research network
- Reports by international organizations such as EMCDDA, Europol, INTERPOL, WHO and UNAIDS
- Peer-reviewed empirical research and scholarly commentaries
- Information collected through the media

The analysis presented here should be viewed as a preliminary assessment of the impact of the COVID-19 pandemic on drug markets, since the situation continues to evolve and comprehensive data for 2020 and 2021 were unavailable at the time of writing. When new data become available it will be possible to determine more precisely whether trends identified during the pandemic are temporary or likely to continue. The present booklet is intended to be as comprehensive as possible, although coverage remained selective as it focused on the areas where more information could be retrieved. An effort was made to focus specifically on developing countries and areas that are not usually covered well despite various data gaps.

such as benzodiazepines. For example, a global survey among addiction medicine professionals conducted between April and mid-May 2020 found increased use of pharmaceutical sedatives in 64 per cent of surveyed countries, while cocaine use decreased in 30 per cent of countries.

The pandemic and related lockdowns aggravated the health situation of many people who use drugs: initial disruptions in the provision of services and treatment for people who use drugs were observed in many countries: a global rapid assessment of service delivery for mental, neurological and substance use disorders in the initial stages of the COVID-19 pandemic[4] found that critical services for the prevention of adverse health consequences of drug users were partially or completely disrupted in 65 per cent of 130 reporting countries, opioid agonist treatment for opioid use disorders was disrupted in 45 per cent of countries, and overdose prevention and management programmes were disrupted in 53 per cent of countries. In some countries already heavily affected by the opioid crisis, COVID-19 appears to have accelerated the trend of increasing overdose deaths. For example, overdose deaths in North America increased by up to 74 per cent in 2020 over 2019.

However, COVID-19 has brought a number of important innovations to the provision of treatment and services to people who use drugs. In all regions, Member States introduced innovations and adaptations to overcome social distancing measures and to continue drug treatment and services in challenging circumstances. Examples of measures introduced or expanded by Member States to ensure the continuity of services during the pandemic include telehealth measures such as remote counselling and the delivery of treatment without the need for face-to-face appointments, take-home opioid agonist therapy medication to reduce the requirements of daily visits, and the provision in a contactless way of equipment to reduce

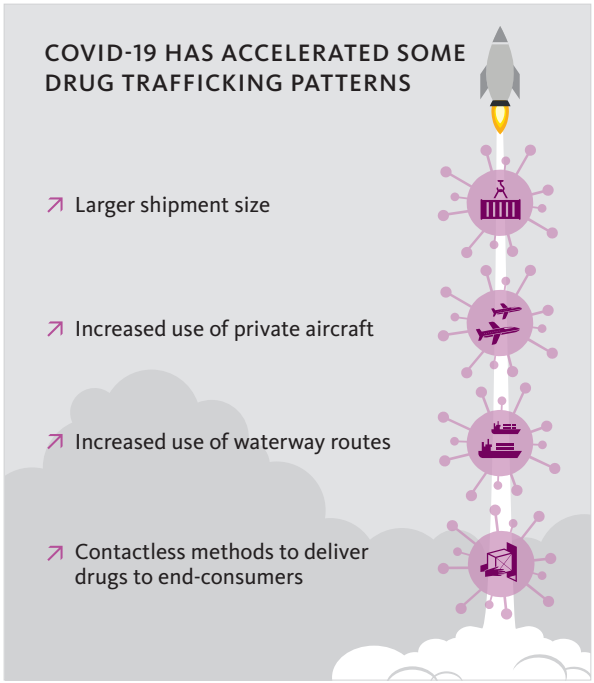
4 WHO, *The Impact of COVID-19 on Mental, Neurological and Substance Use Services: Results of a Rapid Assessment* (Geneva, 2020).

the harms of drug use, such as providing sterile drug use equipment by using vending machines or postal services.

These developments have likely been the result of a combination of factors related to drastic changes in people's lives – for example, reduced mobility, reduced economic activity, more time spent at home and greater unemployment – and the impact of the pandemic on global trade flows and trafficking opportunities.

Beyond the dynamics triggered during the relatively short period of the current pandemic, potentially long-lasting structural socioeconomic changes and the deterioration of social and economic development are likely to have long-term consequences for drug markets and people who use drugs. This is because developments in illicit drug markets are closely linked to these wider social and economic developments. Dynamics that have been exacerbated by the pandemic such as increasing inequality, poverty, adverse mental health conditions and the lack of opportunities for socioeconomic development are factors associated with increased drug use disorders and increased engagement in drug production and trafficking and may lead to higher levels of drug use and production in the near feature.[5] The acceleration of certain drug trafficking trends observed during the pandemic may also prevail and possibly continue at an increased pace.

In the past, economic recessions have led to cuts in drug-related budgets and to a reduction in the resources that Governments have allocated to drug policy and programmes,[6] a development that may also follow the COVID-19-related global recession. However, the innovations and adaptations introduced in drug treatment and service delivery during the pandemic provide opportunities to increase accessibility to services in the future.




5 UNODC, *World Drug Report 2020*, booklet 5, *Socioeconomic Characteristics and Drug Use Disorders* (United Nations publication, 2020).

6 Claudia Costa Storti, Paul De Grauwe and Peter Reuter, "Economic recession, drug use and public health", *International Journal of Drug Policy*, vol. 22, No. 5 (September 2011), pp. 321–325.

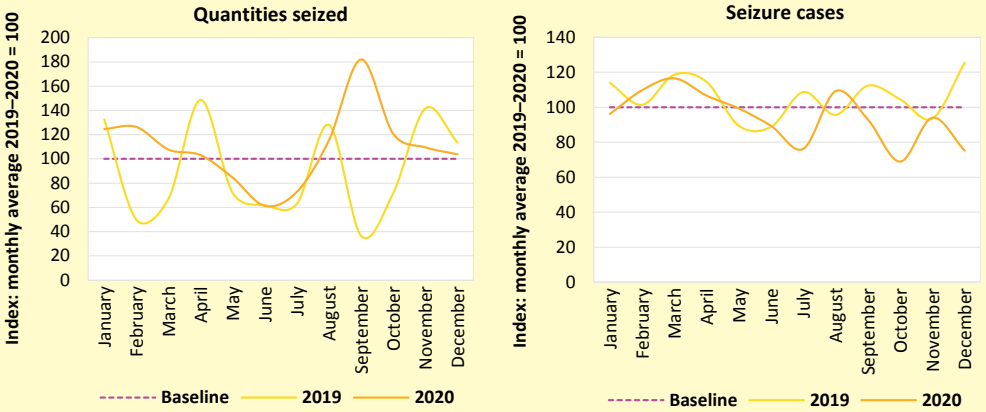
# COVID-19 AND DRUG SUPPLY CHAINS



## Key findings on the impact of the COVID-19 pandemic on drug supply

- Overall, drug supply and trafficking proved to be resilient to COVID-19-related changes.
- After initial disruptions, global drug production was largely unaffected by COVID-19 throughout 2020.
  - Opiate production continued mostly unaffected. A combination of the timing of harvests in Myanmar and Mexico and coping strategies adopted by farmers in Afghanistan, such as a greater reliance on the family labour of women and children and on local workers, meant that global opium production in 2020 was virtually unaffected. As there are no indications of any disruption in the availability of precursor chemicals to manufacture heroin, global heroin production has likely not been affected by the pandemic.
  - Coca leaf production was not affected, but the supply chain of cocaine-related products was disrupted in the early stages of the pandemic, when buyers in Colombia and Peru could not gain access to areas of coca production. However, production recovered soon after COVID-19-related restrictions were eased. The disruption was evident in the sharp drop in coca leaf prices, which declined by some 50 per cent in Colombia and Peru from the first to second quarter of 2020. Price data on legally sold coca leaf in the Plurinational State of Bolivia point to a similar situation in that country.
  - Synthetic drug manufacture continued uninterrupted in South-East Asia, where the large quantities of seizures suggest that manufacturing may have even increased during 2020. However, initial difficulties in the manufacture of, for example, methamphetamine, due to limited precursor availability and mobility restrictions, were observed in North America and Europe, leading to price increases in some markets, and a disruption in the supply of methamphetamine, for example, was observed in Oceania.
- Drug trafficking may have slowed significantly during initial lockdown periods but resumed at the same or even increased levels soon after restrictions were lifted.
  - In all regions, the quantities of drugs seized decreased significantly during the second quarter of 2020 but resumed at the same or even increased levels soon after.
  - The decrease in global quantities of drugs seized points to reduced trafficking activities during the first months of the pandemic, although some countries reported changes in law enforcement capacity related to the COVID-19 pandemic, which may also explain the change.
  - Seizures of drugs trafficked by air and land were most affected by the disruptions; maritime routes were less disrupted.
- Different drug markets were affected by the initial disruptions in different ways.
  - While heroin trafficking continued by and large unabated, cocaine trafficking slowed down in Latin America during the second quarter of 2020, which was possibly related to supply shocks. In Europe, large seizures of cocaine in that period indicate that trafficking was not disrupted at any point, which might be due to the momentum of the supply chain as existing drug inventories in the chain could be trafficked.
  - Methamphetamine trafficking in South-East Asia was not affected. However, in North America, it

**Trends in individual heroin seizures linked to opiates originating in Afghanistan, 2019–2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Data covers Africa, South and Central Asia, Near and Middle East/South-West Asia and Europe.*

decreased, possibly due to increased border controls. In Western Europe, a decrease of 20 per cent in wholesale prices of MDMA in the second quarter of 2020 points to reduced trafficking activity. However, there are indications that trafficking activity has since resumed. In North Africa, MDMA trafficking increased again later in the year, indicating a possible market recovery.

- Cannabis trafficking continued throughout the pandemic, possibly even at increased rates.

› Throughout 2020, a trend towards increased use of maritime and waterway routes and the use of private aircraft was observed, while the trafficking of small drug quantities by commercial air transport decreased.

- The COVID-19 pandemic may have accelerated existing trends of an increased use of sea and waterway routes for drug trafficking. Use of maritime and waterway routes was found to have increased in several regions and countries (Latin America, South-East Asia and in some African countries), possibly related to travel restrictions and increased land border controls worldwide.
- In Latin America, traffickers were increasingly using private aircraft to traffic drugs, as a result of greater difficulties due to land border controls.
- For some drugs, an increase in trafficking by mail was observed in many regions.

› During the COVID-19 pandemic an increase in the size of intercepted shipments of cocaine and heroin was observed in several regions (for example, heroin in South-West Asia, cocaine in Europe and various substances in North America), possibly indicating a global trend towards larger drug shipments trafficked. This trend may be related to the COVID-19 crisis as it is possibly a response to the need to clear inventories and/or to a reduction in opportunities for drug trafficking organizations; however, it is difficult to determine from available data whether that trend was concurrent to or caused by COVID-19.

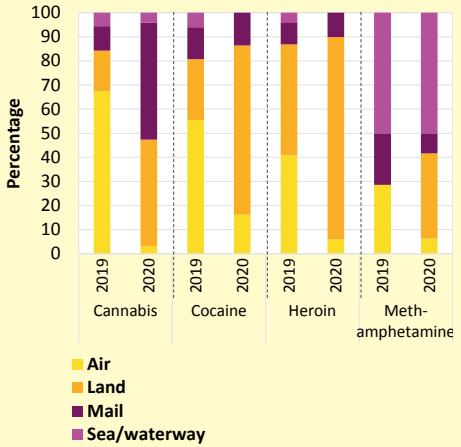
- At the retail level, people who sell drugs to users quickly adapted and used novel ways to distribute drugs.
- In many countries, during periods of mobility restrictions, drug traffickers seized opportunities

brought by the COVID-19 pandemic to distribute drugs in the new, changed circumstances, for example, via food delivery services or concealed in PPE equipment.

- In many countries, there was an increase in seizures by mail and an increased use of technology to facilitate drug trafficking at the retail level, for example, using the Internet or darknet markets, or encrypted cell phone communication tools.

› Given the high volatility of darknet market sites, it is challenging to determine the impact of the COVID-19 pandemic on drug trafficking through the dark web. Some analysis suggests that purchases of small quantities of cannabis have increased on the dark web while purchases of large quantities have decreased during the pandemic. Other studies suggest there have been no changes or even declining drug sales over the dark web. What seems to be more unanimous is an emerging increase in the delivery of drugs by mail, suggesting that the pandemic may have accelerated an ongoing trend towards more remote or contactless modes of buying drugs. What is also clear is the expansion in 2020 of the Hydra Market on the dark web – a marketplace targeting Russian-speaking customers – although this expansion may not be related to the pandemic itself.

**Distribution of small-scale seizure cases, by drug and mode of transportation, Europe, 2019 and 2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: Small-scale seizures are seizures of less than 1 kg. The category of "cocaine" includes cocaine base, cocaine hydrochloride, coca paste, cocaine salts and seizures classified as "cocaine-type substances". The category of "cannabis" includes cannabis herb, cannabis resin and cannabis-type substances. The present figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

## The COVID-19 pandemic and related measures affected drug supply in different ways

Global supply chains of drugs broadly consist of production, trafficking and distribution to people who use drugs. A drug supply chain involves a series of actors linked directly or indirectly in the process of distributing a specific drug, from the sourcing of the raw material to the manufacture, trafficking and delivery of the end product to the user. Various activities are involved across the supply chain and criminal organizations source and procure raw materials, manufacture, refine, transport, store inventory, sell and distribute products to customers.

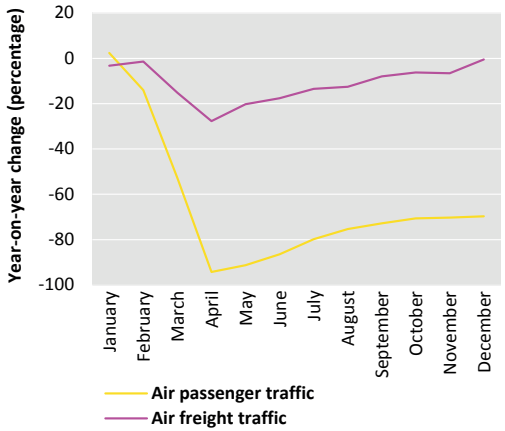
The pandemic has affected drug supply chains where and when it has affected the risks and opportunities at the different stages of the chain, from production to delivery. The drastic reduction of the mobility of people, the reduction in the global trade of goods and services and increased border controls, as well as varying levels of law enforcement activity, have likely affected the risk of drugs being, one way or another, intercepted at some point in the supply chain.[7]

The changes that happened in a very short time were quite dramatic. By the end of March 2020, during the initial lockdowns, about half of the global population experienced some form of mobility restrictions, and numerous borders were closed.[8] Later during the

7 UNODC, Research and Trend Analysis Branch, "COVID-19 and the drug supply chain: from production and trafficking to use", Research brief (Vienna, 2020).

8 International Organization for Migration, "COVID-19 mobility impacts". Available at https://migration.iom.int/.

FIG. 1 **Trends in international air passenger and air freight traffic, 2019–2020**




Source: International Civil Aviation Organization, "Air transport monthly monitor", February 2021.

pandemic, mobility restrictions were no longer ubiquitous but were introduced locally in different parts of the world, affecting many countries and territories. Drug trafficking has been affected by these measures because they made trafficking by individuals ("mules") and private transportation more challenging, and increased border controls made trafficking by land riskier (as reported, for example, in connection with cocaine trafficking in Latin America).

Drug trafficking has also been affected by the restrictions introduced for international and domestic travel, both in the early stages of the pandemic and in later stages. Data from 2020 show that there was a sharp decline by some 70 per cent in international air passenger traffic from March to April 2020, which has not yet returned to prior levels. As a consequence, drug traffickers who relied on air transport for trafficking drugs (*in corpore*, using body packs, or in luggage or by means of corrupt airline personnel) have been the most severely affected. However, that reduction in trafficking through air passenger traffic has had only a limited overall impact on large-scale drug trafficking because, in general, private air travel accounts for only a limited amount of the overall drug supply. This method only accounts for a large share of trafficking in certain drugs in some countries,[9] for example, in South-East Asia and Oceania, where methamphetamines are predominantly trafficked by means of private air travel.[10]

Large quantities of drugs are typically trafficked hidden among legal cargo, and such trafficking seems to have been affected by the global reduction in the trade in merchandise,[11] particularly in the initial stage of the pandemic. Container trade showed a clear decline in the first two quarters of 2020, but quickly recovered to expected levels towards the end of the year.[12] As a result of the drastic change in trade in the initial stages of the pandemic, some drug traffickers have faced an increased risk of interception and difficulties in shipping their product, while others have benefited from the weakening of law enforcement capacity. This situation is reflected, for example, in reports on temporary shortages in the supply of precursor chemicals for methamphetamine manufacture in North America in the early stages of the pandemic.

Lockdown measures and curfews imposed on the general population led to increased risks for people who sell drugs at the retail level. Some countries experienced shortages of some drugs during the early stages of the pandemic and increasing prices, indicating difficulties in retail distribution of drugs. In March 2020, some countries in Europe[13] experienced localized shortages of heroin in the retail market, and countries in North America saw a shortage of methamphetamine. Some 56 per cent of people who use drugs who participated in the web-based Global Drug Survey conducted in the second quarter of 2020 were of the opinion that drugs had become less available during the pandemic.[14]

However, drug traffickers quickly adapted and changed retail distribution methods to overcome the obstacles, for example, by using food delivery services or other

9 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

10 Ibid.

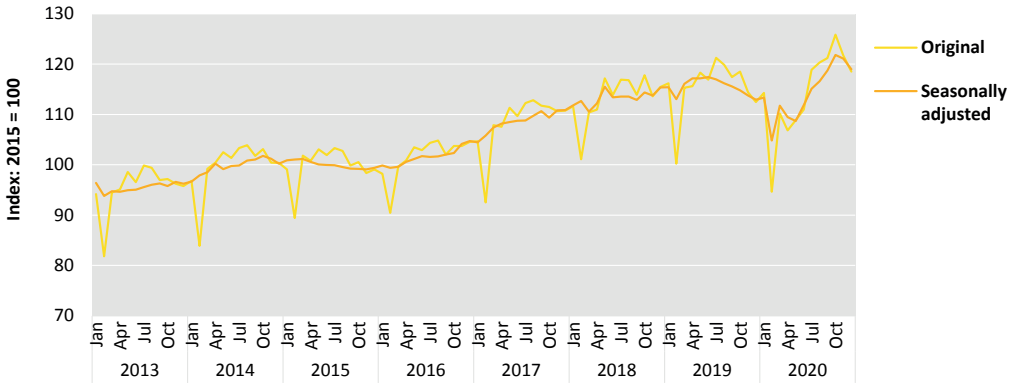
11 United Nations Conference on Trade and Development, *Handbook of Statistics 2020* (United Nations publication, 2020).

12 Institute of Shipping Economics and Logistics, "RWI/ISL container throughput index: slight weakening of world trade", 29 January 2021.

13 Reported submitted, for example, by Czechia in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic in April 2020. The United Kingdom of Great Britain and Northern Ireland and France reported increasing prices and decreasing purity of cocaine at the consumer level, indicative of localised supply shortages.

14 Global Drug Survey, "GDS COVID-19 special edition: key findings report". Available at www.globaldrugsurvey.com.

FIG. 2 Trends in container throughput, 2013–2020




Source: Institute of Shipping Economics and Logistics, "RWI/ISL container throughput index: slight weakening of world trade", 29 January 2021.

*Note: based on data provided by 91 ports.*

transportation means not affected by stay-at-home orders. Contactless methods such as mail delivery, the use of drones and purchases made through the clear web and the dark web were increasingly used, as reported, for example, by some countries of Eastern Europe and South-East Asia.

## Overall, drug supply and trafficking proved to be resilient to COVID-19-related measures

### Impact on the illicit cultivation, production and manufacture of drugs varied by drug and region

Owing to their distinct nature and the location and requirements of production, markets for different drugs have been characterized by their different reactions to the external changes brought by the COVID-19 pandemic. The global production and manufacture of cocaine and opiates, for example, are geographically concentrated and therefore sensitive to changes occurring in just a few countries, whereas the production of other drugs such as cannabis and synthetic drugs is more geographically dispersed and therefore affected in many different ways by the limitations resulting from the COVID-19 containment measures introduced on the cross-border and cross-regional movement of people, goods and services.

### Opiate production has been largely unaffected by the pandemic

The production and manufacture of opiates have been only marginally affected by the pandemic. The pandemic did not affect the production of opium in 2020 in the three countries that account for 95 per cent of illicitly produced opium worldwide: Afghanistan, Mexico and Myanmar. Opium production requires labour-intensive activities in the cultivation and harvest of opium poppy, which could have been affected by the COVID-19 crisis, but a combination of factors – the time when harvest took place and the coping strategies adopted by farmers, for example, relying more heavily on the family labour of women and children and on local workers – prevented a major disruption.

Likewise, while some degree of interruption in the availability of precursor substances for heroin manufacture, most importantly acetic anhydride, was expected in Afghanistan,[15] there are no indications of a disruption in the manufacturing of heroin.

15 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

## Cocaine supply plunged in the early stages of the pandemic but recovered soon after

Cocaine manufacture was disrupted during the initial stages of the pandemic (roughly the second quarter of 2020) and returned to its normal level shortly after in all three main coca-producing countries, Bolivia (Plurinational State of), Colombia and Peru.

Coca bush is a perennial plant that is grown and harvested throughout the year, and its global illicit cultivation does not seem to have been affected by the pandemic. However, in the early stage of the pandemic, coca growers and producers had difficulty selling their products in all three countries, because traffickers were not able to reach producers in the areas where coca leaf is grown.[16] This resulted in falling prices of illicitly sold coca leaf and derivatives in Colombia and Peru and the stockpiling of coca leaf and derivatives such as coca paste. In Peru, for example, the price of coca leaf dropped by 50 per cent between January and May 2020, and a similar development was observed in some departments of Colombia; in the department of Catatumbo, however, local conditions allowed movements of buyers in the area and prices remained stable. In the Plurinational State of Bolivia, prices of legally sold coca leaf more than doubled in major cities,[17] indicating a shortage of coca leaf resulting from traders being unable to reach production areas, too.

After the initial lockdown periods in the first two quarters of 2020, prices of coca products returned almost to the pre-COVID-19 levels in Colombia and Peru, suggesting that the market had recovered. In Peru, for example, in June 2020 the price of coca paste was almost 30 per cent lower than in January, but by November it was 10 per cent higher. A shortage of precursor chemicals necessary for converting coca leaf into cocaine and cocaine into cocaine hydrochloride was also observed during the first months of the pandemic in Colombia but did not seem to have had a lasting effect on cocaine manufacture throughout 2020.[18]

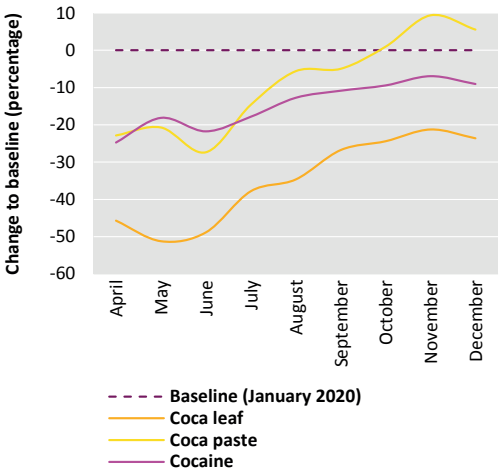
The pandemic may also have had wider implications for coca production. There are indications from Colombia of the increased participation of some population subgroups

16 Based on price data, key informant interviews in countries and qualitative research conducted by UNODC country offices.

17 Berthy Vaca, "Bolo caro: la hoja de coca escasea en Santa Cruz y aumenta más del doble el precio de la libra", *El Deber*, 7 April 2020.

18 Based on price data, key informant interviews in countries and qualitative assessments from UNODC country offices.

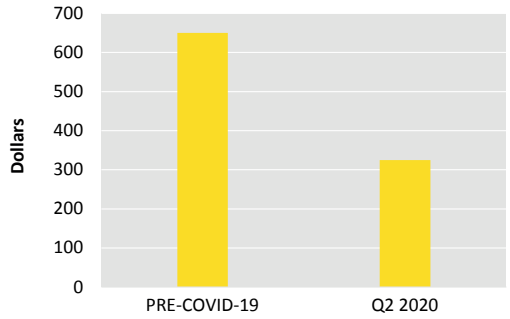
FIG. 3 **Change in national average prices of coca leaf and derivatives in Peru, April 2020–December 2020, as compared to January 2020**




Source: National Commission for Development and Life without Drugs (DEVIDA).

*Note: The price in January 2020 is the baseline. All values are presented relative to the price level at that time.*

FIG. 4 **Prices of coca paste in the departments of Cauca and Antioquia, Colombia, pre-COVID-19 and second quarter of 2020**




Source: Interviews with farmers in Colombia, UNODC country office in Colombia.

in drug production activities, for example, teenagers who were not in school due to lockdown measures and took up coca leaf collection to earn additional money.[19] Moreover, organized crime groups have been found to be seizing the opportunities that COVID-19-related disruptions brought and have been increasingly taking over State functions in certain areas.[20]

## Synthetic drug manufacture continued uninterrupted in some regions but faced initial difficulties in others

While synthetic drug manufacture in East and South-East Asia (mostly methamphetamine) was hardly affected, manufacture in other parts of the world was hindered by difficulties in obtaining precursor chemicals in the early stages of the pandemic, affecting, for example, the illicit manufacture of methamphetamine and fentanyls in North America, although these were quickly overcome and manufacture (and to a lesser degree, trafficking) continued uninterrupted.

Synthetic drugs do not require access to suitable land or climate and make only limited demands on manufacturing facilities and the labour force. However, their manufacture frequently requires internationally controlled precursor chemicals. Those precursors or pre-precursors are mostly manufactured in and imported from a few countries in East and South-East Asia, where there is a large, established chemical industry.[21]

The sharp decline in global trade triggered by the pandemic resulted in a short-term shortage of precursors and pre-precursors in regions outside Asia.[22] This was expected to have a particular impact in countries where drug traffickers rely on intercontinental shipments from East Asia to manufacture methamphetamine and fentanyls.[23, 24, 25]

By April 2020, it was reported in the media that precursors from East and South-East Asia had stopped arriving at Mexican ports, resulting in shortages for manufacturing methamphetamine,[26, 27] which may have led to a subsequent increase in methamphetamine prices in the United States of America.[28] Temporary shortages of precursors were also reported in the Middle East and North Africa (where they are used for the manufacture of "captagon")[29] and in West Africa, where in one country it was observed that prices for crystalline methamphetamine increased by 10 per cent between February and April 2020 due to precursor shortages.[30] One notable exception was South-East Asia, where there were no reports of shortages or impeded manufacture of synthetic drugs at the onset of the pandemic. Large seizures of methamphetamine made in South-East Asia in 2020 suggest that its supply and manufacture were not disrupted; in this subregion, precursor substances are supplied from within the subregion and neighbouring subregions and trafficked across informal border crossings.[31]

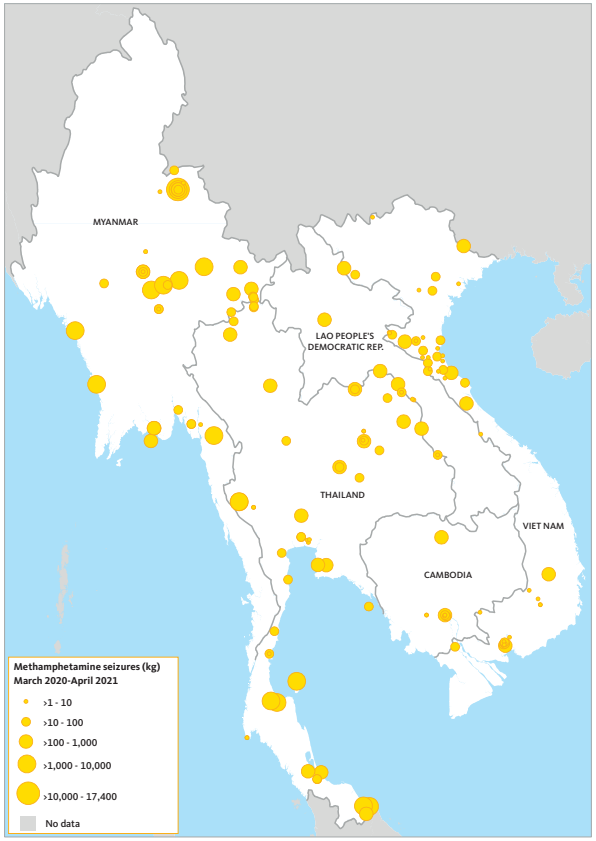
While it was expected that the initial lockdown in China would disrupt the supply of precursor chemicals used in methamphetamine manufacture in Western and Central Europe, container traffic remained a viable transport option, and the manufacture of methamphetamine and MDMA, for example, was hardly affected by a lack of relevant chemicals.[32] In countries where there is domestic manufacture of synthetic drugs using domestic precursors, as in the case of mephedrone and other popular synthetic drugs in the Russian Federation, no major impact on the domestic drug market was visible.[33]

Overall, in 2020, manufacture of MDMA and methamphetamine continued in Western Europe throughout

19 UNODC field office assessment based on the collection of qualitative and quantitative information.
20 UNODC, "The impact of COVID-19 on organized crime", Research brief (Vienna, 2020).
21 UNODC, *World Drug Report 2014* (United Nations publication, 2014).
22 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
23 Bryce Pardo, "Supplying synthetic opioids during a pandemic: an early look at North America", *International Journal of Drug Policy* (2020).
24 Gabriel Stargardter and Drazen Jorgic, "Special report: Peruvian coca farmers to Paris pushers, coronavirus upends global narcotics trade", Reuters Business News, 22 April 2020.
25 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
26 Héctor De Mauleón, "El crimen organizado durante la pandemia", *El Universal*, 3 April 2020.
27 June s. Beittel and Liana W. Rosen, "Mexican drug trafficking and cartel operations amid COVID-19", Report No. IN11535 (Washington D.C., 2020), updated 15 December 2020.
28 UNODC, *Global Synthetic Drugs Assessment 2020* (United Nations publication, 2020).
29 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
30 Report by the National Drug Law Enforcement Agency of Nigeria to UNODC.
31 UNODC, *Global Synthetic Drugs Assessment 2020*.
32 EMCDDA, *New Psychoactive Substances: Global Markets, Global Threats and the COVID-19 Pandemic – An Update from the EU Early Warning System* (Luxembourg, Publications Office of the European Union, 2020).
33 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

2020, as evidenced by the number of illicit laboratories dismantled and dump sites reported.[34] Manufacture of synthetic drugs used in recreational settings, such as MDMA, may have been affected by a reduction in demand resulting from the closure of bars and night clubs and the cancellation of music festivals. This situation reportedly caused an initial drop in wholesale prices of more than 20 per cent in the second quarter of 2020 in manufacturing countries in Western and Central Europe.[35] By the end of that year, wholesale prices started to increase again in Europe, suggesting a possible recovering demand for MDMA in at least some regions: although price data from North Africa of "ecstasy", typically sourced from Europe, indicated a disruption of "ecstasy" supply in 2020, major seizures made in July 2020 pointed towards a resurgence of its trafficking in the second half of 2020.[36] However, there have been indications that some wholesalers in Europe hold back the chemicals used for the manufacture of MDMA in the hope of obtaining higher prices a few months later.[37] Moreover, a strong increase in dismantled manufacturing sites of methamphetamine in the Netherlands (increasing from 9 in 2019 to 32 in 2020)[38] may indicate a shift from the manufacture of MDMA to methamphetamine.

**MAP 1** **Significant methamphetamine seizures in South-East Asia, March 2020–April 2021**

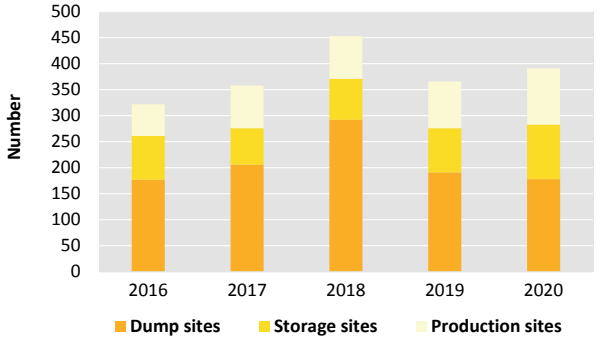



Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

**FIG. 5** **Number of dismantled manufacture locations, storage locations and dump locations of synthetic drugs, precursors and new psychoactive substances, the Netherlands, 2016–2020**




Source: The Netherlands, Poilitie, "Cluster synthetische drugs intel and expertise (ERISSP Landelijk overzicht Synthetische Drugs 2020)", version 1.4 (March 2021), article in Dutch.

34 EMCDDA and European Union Agency for Law Enforcement Cooperation (Europol), *EU Drug Markets: Impact of COVID-19* (Luxembourg, Publications Office of the European Union, 2020).

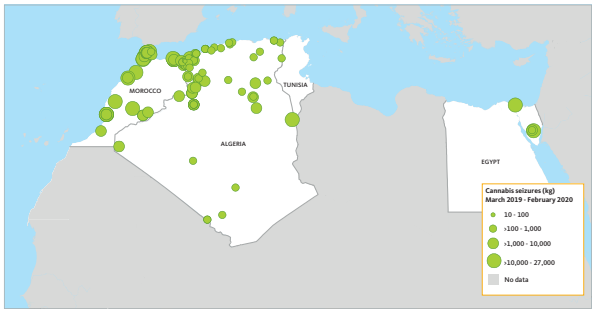
35 UNODC meeting with law enforcement experts from Belgium and the Netherlands on the impact of COVID-19 on ATS manufacture, 22 February 2021.

36 UNODC field office assessment based on the collection of qualitative and quantitative information.

37 UNODC meeting with law enforcement experts from Belgium and the Netherlands on the impact of COVID-19 on ATS manufacture, 22 February 2021.

38 The Netherlands, Poilitie, "Cluster synthetische drugs intel and expertise (ERISSP Landelijk overzicht Synthetische Drugs 2020) ", version 1.4 (March 2021), article in Dutch.

MAP 2 **Significant cannabis seizures in North Africa, March 2019–February 2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

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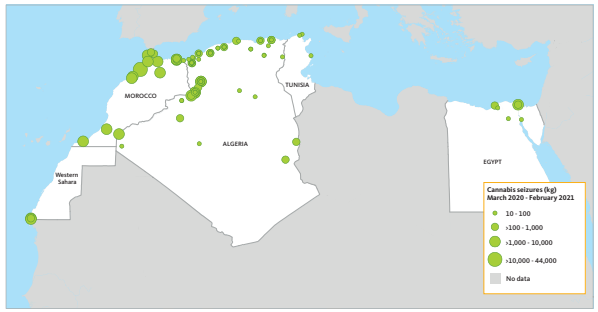
MAP 3 **Significant cannabis seizures in North Africa, March 2020–February 2021**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

## Cannabis production may have expanded due to increased demand

While monitoring cannabis production is challenging and no reliable data are available, a reported increase in the quantities of cannabis seized and an increase in demand for the drug may have led to an increase in cannabis production worldwide.

Unlike other plant-based drugs, for which production is concentrated in a limited number of countries, cannabis is produced in almost all countries worldwide. Cannabis products are often produced and distributed locally via domestic supply chains. There are no indications that these supply chains have been drastically disrupted by the COVID-19 measures.

Because of the localized and often small-scale nature of cannabis production, it is difficult to monitor and thus challenging to evaluate how it has been affected by the COVID-19 pandemic.

Data available to date on drug use during the pandemic point to a stable or increased use of cannabis in countries in many regions.[39] A global survey of addiction medicine professionals conducted between April and mid-May 2020[40] found that cannabis consumption was perceived to have increased in 42 per cent of countries surveyed and prices to have increased in 39 per cent of countries surveyed and to have decreased in 37 per cent of countries surveyed.

In the absence of information on global production of cannabis, this can be read as an indication that supply may have expanded to meet the increase in consumption. One country, Belgium, reported in 2020 that cannabis production did not seem to have been disrupted, and seizure activity in 2019 and 2020 also pointed to a continuation of cannabis trafficking operations in North Africa[41, 42] and Europe,[43] where some countries, such as Latvia,[44] reported an increase in production sites.

39 See section on the impact of COVID-19 on drug use in the present booklet.

40 Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

41 Response submitted by Belgium in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

42 See EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in south European Neighbourhood Policy countries", EMCDDA trendspotter briefing (December 2020).

43 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in south European Neighbourhood Policy countries", EMCDDA trendspotter briefing (September 2020).

44 Responses to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

## After initial disruptions, transnational drug trafficking proved resilient to the impact of COVID-19 measures, with larger shipments being increasingly trafficked

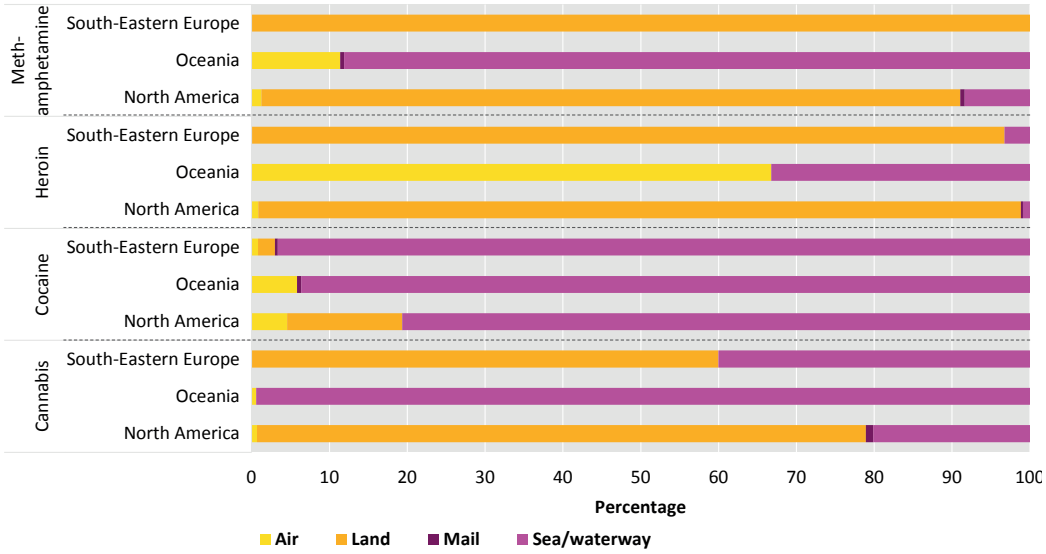
The trafficking of different drugs was impacted in different ways by the measures to contain COVID-19, depending on the most common modes of transportation used and the length and severity of mobility restrictions, closures of borders and the reduction in the licit trade of goods and services.

Heroin is mostly trafficked by land, often hidden in legal cargo, whereas cocaine is frequently trafficked by sea, in containers and sometimes in non-commercial craft such as specialized semi-submersibles, boats and yachts. Prior to the onset of the COVID-19 pandemic, synthetic drugs tended to be trafficked more frequently by air than were other drugs, with this mode of transport accounting for large proportions of the synthetic drugs supplied to some countries, for example, as reported by South Korea.[45] The biggest impact on synthetic drug trafficking was therefore expected in countries to which the drugs are trafficked by passengers on commercial flights.

## In many countries, quantities of drug seized decreased in the second and third quarters of 2020 but did not in many others

A common theme in all regions and for all drugs is that drug trafficking activities were disrupted during the initial phase of the pandemic (at least to a certain degree) but have proved to be resilient: by the end of 2020 most drug markets had recovered or were on the way to recovery.

FIG. 6 **Distribution of seized quantities of cocaine, heroin and methamphetamine, by mode of transportation, selected countries and regions, prior to the COVID-19 pandemic, averages for the period 2016–2019**




Source: UNODC, Drugs Monitoring Platform.

*Note: Subregions were selected based on availability of data. The category of "cocaine" includes cocaine base, cocaine hydrochloride, coca paste, cocaine salts and seizures classified as "cocaine-type" substances. The category of "cannabis" includes cannabis herb, cannabis resin and cannabis-type substances. The present figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

45 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

Many countries in the Americas saw a decline in cocaine seizures in the second and third quarters of 2020,[46] possibly as a consequence of the initial disruption in the supply of cocaine in Bolivia (Plurinational State of), Colombia and Peru in the second quarter. However, changes in the intensity of law enforcement activities could have played a role in that trend, too.

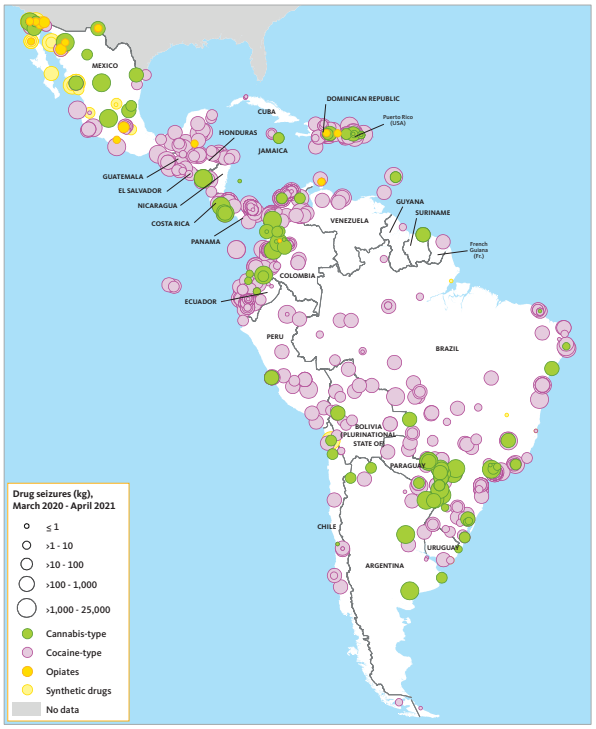
By contrast, Europe, an important destination market for cocaine, did not see a reduction in large-scale cocaine seizures in the early stages of the pandemic.[47] Cocaine is mostly transported to Europe by sea. Shipments that arrived in Europe in March and April 2020 were in all likelihood loaded and shipped prior to the first wave of mobility restrictions (port-to-port transit from Brazil to Spain, for example, can take up to 30 days). Authorities of the Netherlands reported, for example, that more cocaine was seized in the port of Rotterdam between mid-March and mid-April than in the year before.[48]

Similarly, in Brazil, a major transit country for cocaine, no major disruptions in the cocaine trade were reported, and throughout the pandemic, seizures continued on a large scale and cocaine prices remained stable,[49] indicating that the supply chain was resilient to shocks, possibly due to the existence of drug inventories.

Heroin seizures, on the other hand, did not decline in the initial stages of the pandemic or later in the immediate vicinity of Afghanistan (Iran (Islamic Republic of) and Pakistan), substantiating the findings that heroin manufacture and trafficking were not disrupted. Reductions in the quantities seized were observed, however, in some of the subsequent transit countries along the Balkan route, including countries in South-Eastern Europe, and in Western and Central Europe.[50] A substantive reduction in quantities seized and/or drug-related crime was, for example, reported by Albania and Bulgaria in the initial lockdowns, between March and April 2020.[51] Later assessments,[52] however, pointed to a normalization of the situation, with no major impact observed on drug trafficking activities.

The quantities of heroin seized continued to decrease throughout 2020 in countries along the northern route, including in countries in Central Asia and in the Russian Federation, a trend possibly accelerated by COVID-19 measures.[53]

**MAP 4 Drug seizures in the Americas, March 2020–April 2021**




Source: UNODC, Drugs Monitoring Platform.

*Note: Opiate seizures of Ecuador are omitted because of limited data availability. The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

46 UNODC, Response to the Global Programme on Strengthening Criminal Investigation and Criminal Justice Cooperation along Drug Trafficking Routes (CRIMJUST) annual meeting pre-assessment questionnaire, November 2020.

47 EMCDDA, *European Drug Report 2020: Trends and Developments* (Luxembourg, Publications Office of the European Union, 2020).

48 Netherlands Politie, Intelligence Division, National Intelligence Centre, "Information report update: COVID-19 pandemic and the link with the drugs market" (May 2020).

49 Federal Police of Brazil.

50 UNODC, Drugs Monitoring Platform.

51 Report submitted by respective Member States in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

52 UNODC Regional Programme Office for South-Eastern Europe.

53 CARICC Information Bulletins, Nos. 211–217.

There was evidence of the strong resilience of drug trafficking organizations even during the early stages of the pandemic, when they quickly adapted to the situation and changed their modi operandi. This included increasingly concealing drugs in shipments of PPE equipment (in the Balkan countries), increasingly using alternative modes of transport such as private ships to be able to continue smuggling cocaine (as reported by Latin American countries), and increasingly relying on maritime trafficking routes.

Once the restrictions were no longer universal and countries started to open up again, drug trafficking resumed, often at a faster pace than before, as indicated by the increased seizures by law enforcement authorities in many countries. A possible explanation is that, at least in some countries and for some substances, drug inventories were built up during the period of lockdown measures and then entered the market later.

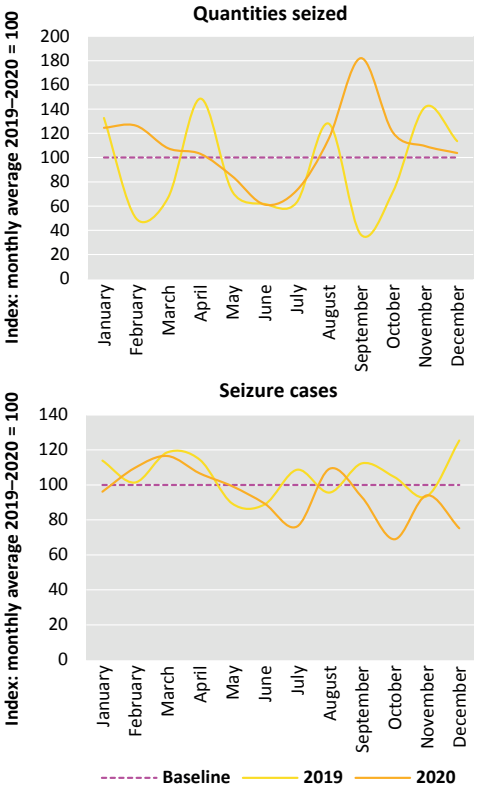
## Use of waterways and maritime routes further intensified during 2020, together with the use of private aircraft

Several countries have indicated shifts in drug trafficking routes and more intense use of maritime or waterway routes by drug traffickers, in particular Bolivia (Plurinational State of), Brazil, Colombia, Ecuador and Panama and countries in North Africa, Europe and South-East Asia. These shifts may be explained by border closures and difficulties in trafficking by land, as well as a reduction in commercial flights, but they may also be a continuation of existing trends, possibly accelerated by COVID-19 measures, such as the increasing use of sea transport for cocaine trafficking to Europe. Countries in Latin America (Brazil, Colombia, Ecuador and Panama) observed an increasing trend in the use of private aircraft.

## In 2020, a trend towards larger shipments emerged

Another pattern that emerged during the pandemic was that, at the wholesale level, shipments of trafficked drugs were less frequent but larger, as was observed in a number of countries, including shipments of opiates trafficked via Azerbaijan, Iran (Islamic Republic of) and Pakistan, and shipments of various substances trafficked from Mexico to the United States, with indications in Europe and West Africa of that trend being true of maritime trafficking in cocaine. In Europe, some of the largest cocaine seizures ever recorded took place during the COVID-19 crisis.[54] The trend was also observed in the trafficking of opiates from Afghanistan: observed seizure quantities considered in combination with the trend in the number of seizure cases suggest an increase in the size of shipments towards the end of 2020. An increasing size of drug shipments was also observed in West and Central Africa for cocaine and in Egypt for "captagon".

FIG. 7 **Trend analysis of individual heroin seizures linked to opiates originating in Afghanistan, 2019–2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Data covers Africa, South and Central Asia, Near and Middle East/South-West Asia and Europe.*

54 UNODC, Drugs Monitoring Platform.

Seizure data suggest that the increase in larger shipments of drugs could be explained by a change in trafficking modalities caused by a reduction in opportunities for drug trafficking organizations or, in the case of cocaine, by increased quantities being shipped as inventories were cleared. It is also possible that changes in the capacity and prioritization of law enforcement agencies to target larger shipments could have caused the increase, although it is unlikely that such changes happened at the same time across so many countries. Assessing whether this trend was caused by the dynamics of the COVID-19 pandemic or concurrent to it remains challenging.

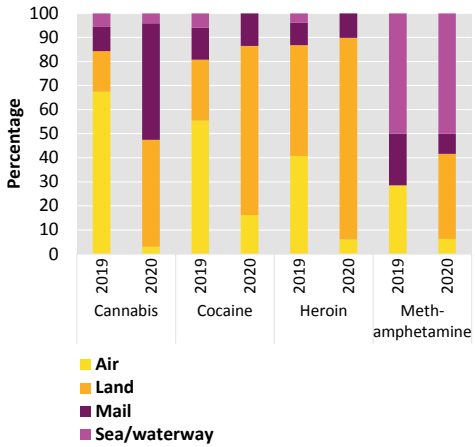
## Drug traffickers ensured retail distribution continued unabated during lockdown conditions

COVID-19 mobility restrictions led to an increase in home deliveries of drugs (as reported, for example, in Algeria, Ireland, Malaysia, Spain, the United Kingdom of Great Britain and Northern Ireland and countries in Latin America and the Caribbean), and drug distributors in many countries took advantage of the fact that the mobility restrictions did not apply to the transport of food.[55, 56] In the Philippines, for example, there have been examples of vehicles being marked to appear to be government vehicles that were then used to transport drugs disguised as essential commodities.[57] In countries in Latin America, drug distributors reportedly disguised themselves as essential workers delivering food or driving ambulances.[58]

New transport and concealment methods have also emerged. In South-East Asia and Central Asia, for example, there was an increase in the use of drones to transport drugs and the concealment of drugs in shipments of fruit and vegetables.[59] In the Netherlands, drugs have been found in lorries and containers filled with PPE and medicines needed to treat COVID-19. The drug traffickers may have hoped that customs officers would not subject such shipments to rigorous inspections.[60]

A number of countries in all regions also reported the increased use of mail services for small- and medium-scale shipments, including Latvia,[61] Thailand,[62] the Philippines,[63] Kyrgyzstan[64] and Nigeria.[65] For example, the analysis of individual seizure data suggests that in Europe there has been a sharp increase in cases of small seizures of drugs

FIG. 8 **Distribution of small-scale seizure cases, by drug and mode of transportation, Europe, 2019 and 2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: Small-scale seizures are seizures of less than 1 kg. The category of "cocaine" includes cocaine base, cocaine hydrochloride, coca paste, cocaine salts and seizures classified as "cocaine-type substances". The category of "cannabis" includes cannabis herb, cannabis resin and cannabis-type substances. The present figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

55 International Criminal Police Organization (INTERPOL), "Dealers using food delivery services to transport drugs during COVID-19 lockdowns", 30 April 2020.

56 Based on reports submitted by respective Member States in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic and information collected through UNODC field offices.

57 Ibid.

58 Steven Dudley and Jeremy McDermott, "GameChangers 2020: how organized crime survived the pandemic" InSight Crime, 21 December 2020.

59 UNODC field office assessment based on the collection of qualitative and quantitative information; and see CARICC Information Bulletins, Nos. 211--217.

60 Netherlands Politie, Intelligence Division, National Intelligence Centre, "Information report update".

61 Report submitted by Latvia in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

62 UNODC/HONLAP/44/CRP.12.

63 Report submitted by the Philippines in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

64 UNODC Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia" (Tashkent, 2020).

65 UNODC field office assessment based on the collection of qualitative and quantitative information.

trafficked by mail and by land, and a decline in seizure cases of drugs trafficked by air.[66]

## Drug trafficking using the Internet may have accelerated during the COVID-19 pandemic

The COVID-19 pandemic has changed shopping behaviour by accelerating the shift towards e-commerce and triggering a change towards online shopping that is likely to have lasting effects.[67] There are indications that this trend has affected not only licit goods but also purchases of controlled drugs. Increased digital interconnectivity has brought about innovations in how global drug supply chains operate, with technology and the Internet increasingly serving as an avenue for the advertisement and sale of a variety of substances that supply illicit drug markets, whether controlled drugs, NPS or drug precursors.[68]

While some of these substances are sold on the clear web, others have found their way to the deep web, onto darknet markets. Several sources have found that people who use drugs made greater use of markets on the dark web and clear web during the pandemic lockdowns,[69, 70, 71] although the volatility of those markets makes it difficult to attribute that change to COVID-19-related conditions.

Drug sales on darknet markets constitute only a small fraction by volume of total drug sales,[72] but they are still relevant for understanding the effects of COVID-19 restrictions on drug supply, in particular because they provide an opportunity to understand trends in real time. These markets provide indications of drug prices and supply and demand during the pandemic[73] and may also point to future changes.

An analysis of buyers' feedback reports on three large European darknet markets, used as a proxy indicator for sales activity, quantity and price, found an increase in the use of the darknet, most notably for the purchase of small quantities of herbal cannabis, as monthly reviews increased from about 14,000 in January 2020 to about 18,000 in March 2020.[74] The data suggest that there may be two main drivers of these developments: people who buy cannabis in order to resell it had reduced their activities, possibly because they expected that social distancing measures would make resale more difficult, and people who bought cannabis for personal use or for use among their social networks had increased their purchasing activity on the darknet market.[75]

In Germany, the overall use of the darknet for purchasing drugs appears to have increased, although drug prices paint a mixed picture. Compared with the prices in 2019, the prices of seven drug types, sold on the darknet in quantities of up to 500 grams per unit, decreased by 10 to 41 per cent by April 2020, while the prices of four other types increased by 4 to 34 per cent, potentially indicating different trends in the demand for different substances.[76]

In Romania, national experts noted an increase in the number of parcels ordered from darknet markets early in the pandemic.[77] An increase in the use of online methods to purchase drugs has also been observed in China,[78] the Russian Federation[79] and Thailand.[80] Analysis conducted in New Zealand found that the number of listings for illicit drugs on international darknet markets surged by 495 per cent between 23 December 2019 and 23 March 2020. For example, a darknet market specializing in shipping within New Zealand had several mentions of COVID-19 "bargains" and "discounts" and had experienced a tenfold increase in sales volume in 2020.[81]

66 UNODC, Drugs Monitoring Platform.

67 Association NetComm Suisse and United Nations Conference on Trade and Development, *COVID-19 and E-Commerce: Findings from a Survey of Online Consumers in 9 Countries* (Geneva, 2020).

68 See booklet 2 of the present report.

69 EMCDDA, *European Drug Report 2020*.

70 CARICC, Information Bulletin, No. 217; and EMCDDA, "EMCDDA special report: COVID-19 and drugs – drug supply via darknet markets" (May 2020).

71 New Zealand, National Drugs Intelligence Bureau, "The effects of COVID-19 on New Zealand's illicit drug landscape" (June 2020).

72 See booklet 2 of the present report.

73 Kim Moeller and Sveinung Sandberg, "Putting a price on drugs: an economic sociological study of price formation in illegal drug markets", *Criminology*, vol. 57, No. 2 (May 2019), pp. 289–313.

74 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*.

75 EMCDDA, "EMCDDA special report: COVID-19 and drugs".

76 Germany, Bundeskriminalamt, "Effects of the Coronavirus pandemic on drug-related crime in the darknet", document made available to UNODC.

77 Report submitted by Romania in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

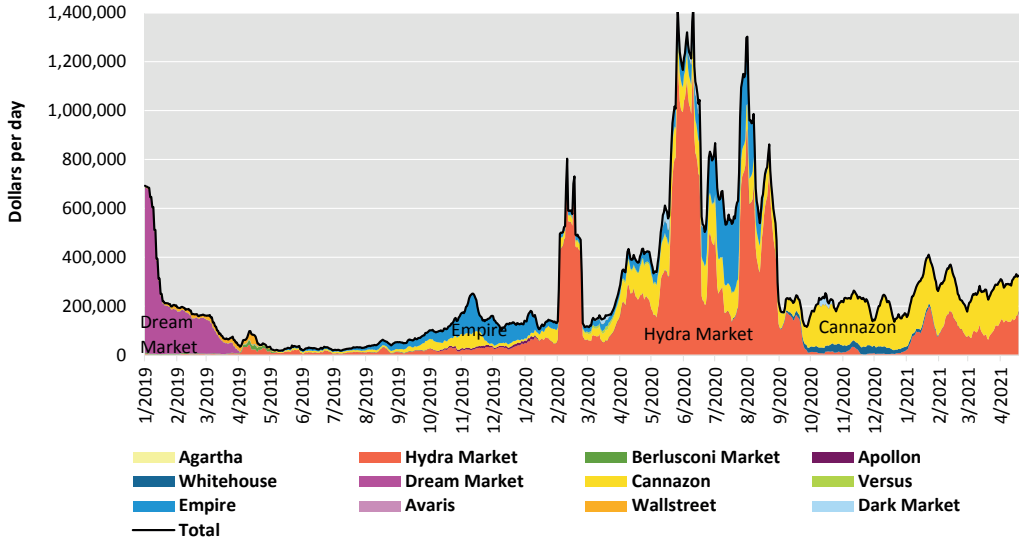
78 China, National Narcotics Control Commission, "Latest situation on synthetic drugs and responses to the threats in China", presented at the Global SMART Programme Regional Workshop, held in November 2020.

79 CARICC Information Bulletin", No. 217.

80 Thailand, Office of Narcotics Control Board, "Latest situation on synthetic drugs and responses to the threats in Thailand", presented at the Global SMART Programme regional workshop, "Impact of COVID-19 on the drug market in East and South-East Asia and the Pacific", held in November 2020.

81 New Zealand, National Drugs Intelligence Bureau, "The effects of COVID-19 on New Zealand's illicit drug landscape".

FIG. 9 Daily minimum sales on 12 major global darknet markets, January 2019–April 2020




Source: UNODC analysis, based on data from Hikari laboratories.

*Note: Data refer to minimum stacked market sales. Data are presented as seven-day averages. All data shown reflect a lower bound estimate of sales as the current web-crawler techniques do not cover all sites on a specific market and customers may purchase not just one but various units of a drug offered for sale over the dark web and this information may not necessarily be contained in the feedback received that is subsequently used for the analysis.*

In Australia,[82] a similar study of the average numbers of listings on darknet markets found an initially stable trend in the early months of the COVID-19 pandemic, between February and April 2020. However, those darknet markets appeared quite volatile, and there was a sharp increase in listings in May 2020, attributable to a single market. From June to August 2020 a decline in drug listings was observed, which was largely attributable to the closure of two major darknet markets during that period. The study acknowledged that the detected drug listing trends were dependent on the volatile nature of darknet market activity and predated the pandemic. As such, the current evidence was found to be inconclusive about whether or not the COVID-19 pandemic itself had had an impact on the observed drug listings.

By contrast, in the United States, some media sources have reported a decrease in online drug sales over the dark web,[83] while the Government of the United States has noted that some darknet markets have been closing, ceasing service or warning customers about shipping and delivery delays.[84]

All these findings reflect the volatility of marketplaces on the dark web observed over the past decade,[85] which is likely to have continued during the pandemic. An analysis of 10 major darknet markets that sold drugs in 2019 and 2020 shows variations in the popularity of these markets over time. During 2020, drug sales on these 12 darknet markets quadrupled when compared to 2019, and an increase was notably observed on the Hydra market, a darknet market mainly targeting Russian-speaking coun-

82 Rajat Katyal and others, "Trends in the availability and type of drugs sold on the Internet via cryptomarkets, September 2019–September 2020", Drug Trends Bulletin Series (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2020).

83 Jim Mustian and Jake Bleiberg, ""Cartels are scrambling": Virus snarls global drug trade", Associated Press, 19 April 2020.

84 Report submitted by the United States in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

85 See booklet 2 of the present report.

tries. Although it was set up in 2015, Hydra has grown dramatically in the last two years, accounting in 2020 for 60 per cent of all drug sales on the 12 major darknet markets combined.[86]

Further international analysis found that darknet markets experienced some shipping problems during the initial lockdowns. A study carried out from January to mid-April 2020,[87] for example, estimated that during the period from 1 January to 21 March 2020, 60 to 100 per cent of transactions were successfully delivered to buyers, but that after that the share of deliveries that either had issues or failed increased greatly and came to account for the majority of all shipments. The success rate was as low as 21 per cent on some days, suggesting that the lockdowns may have temporarily disrupted drug activities on the dark web.

## Drug trafficking groups have adapted rapidly to the new and changing conditions

Although trafficking groups seem to have adapted rapidly to the new and changing conditions resulting from the onset of the COVID-19 pandemic, this has been manifested in different ways around the world. The rapid adaptation of organized crime groups to the new environment was reported in the early stages of the pandemic in some countries of the western Balkans, where certain organized crime groups involved in drug trafficking were moving into forms of crime such as cybercrime and trafficking in falsified medicines.[88]

In Latin America and the Caribbean, for example, some organized crime groups have filled the economic and political void left by the COVID-19 pandemic and used it as a window of opportunity to exert social control in local communities through actions of solidarity and care rather than the accustomed violent coercion. That approach of solidarity is aimed at bolstering the legitimacy, power and social capital of those groups, helping them to co-opt civil society and the State in order to support their criminal operations.[89]

Criminal groups in Mexico have distributed aid packages branded with cartel insignia and publicized these activities on social media in an apparent attempt to win over local communities and attract new recruits.[90] In Afghanistan, the Taliban have largely supported the COVID-19-related restrictive measures and reportedly enforced quarantine for migrants and distributed gloves, masks and information on how to avoid spreading the virus. It has also been reported that the Taliban have been enforcing social distancing by cancelling public gatherings and weddings and asking people to pray at home rather than at mosques.[91] Meanwhile, reports from Italy[92] indicate that the mafia has been trying to increase its legitimacy and profit from the increased poverty and the social crisis induced by COVID-19 measures by, for example, delivering help packages to those in need. Criminal groups in Brazil, Guatemala and Mexico, gangs in El Salvador and non-state armed groups in Colombia appear to have taken over State functions by keeping residents indoors, enforcing curfews and quarantines and providing basic services.[93]

Nevertheless, the operating environment during the COVID-19 pandemic has also caused uncertainty for transnational drug trafficking organizations. According to authorities in the United States,[94] several high-profile seizures in Mexico in 2020 suggested that criminal groups in the country have made miscalculations and experienced problems in trafficking drugs to the border, at least in the early stages of the pandemic; in response, those groups seem to have been stockpiling drugs and cash along the border with the United States.

While there may have been some expectations that COVID-19-related measures could increase organized crime-related violence, an overview of homicides committed during the pandemic in certain Latin American countries did not reveal a clear trend in that direction.[95] In the European Union, however, the instability in the drug markets early in the pandemic created an increasingly volatile environment for criminal businesses along the drug supply chain. This appeared to have resulted in increased levels of violence among mid-level drug suppliers and distributors, and local conflicts over drug

86 UNODC analysis based on original data from Hikari Labs.
87 Andréanne Bergeron, David Décary-Hétu and Luca Giommoni, "Preliminary findings of the impact of COVID-19 on drugs crypto markets", *International Journal of Drug Policy*, vol. 83 (2020).
88 UNODC field office assessment based on the collection of qualitative and quantitative information.
89 UNODC, "The impact of COVID-19 on organized crime".
90 Ibid.
91 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
92 UNODC, "The impact of COVID-19 on organized crime".
93 Ibid.
94 Beittel and Rosen, "Mexican drug trafficking and cartel operations".
95 UNODC, "Research brief: effect of the COVID-19 pandemic and related restrictions on homicide and property crime" (2020).

distribution and territory during the pandemic were also noted.[96]

## Regional and country-level overview of the impact of the COVID-19 crisis on drug supply

### Opium poppy cultivation and opium production

#### Afghanistan

The COVID-19 crisis hit Afghanistan at the end of March 2020, during the key months of the opium harvest, which takes place between March and June. At the beginning of the harvest, a shortage of poppy lancers was observed in the western and south-western provinces of the country. However, later reports indicated that women and children in poppy-growing households were increasingly being engaged in the poppy-lancing process, as were people who had lost their jobs due to the COVID-19 crisis.[97] Indeed, most recent reports have indicated that the harvest – and opiate trafficking in general – was largely uninterrupted in the country.[98] While it had been expected that there would be some degree of interruption in the availability of precursor substances for heroin manufacture, most importantly acetic anhydride, which needs to be trafficked into Afghanistan from abroad and is mostly diverted from legal markets,[99] there are no indications of a disruption in supply.

#### Myanmar

The 2020 opium harvest in Myanmar was not at all affected by the COVID-19 crisis, as it took place at the beginning of the year. The decrease of 20 per cent in the illicit production of opium observed in 2020 is a continuation of a long-term decline in the Myanmar opiate market that started in 2015, rather than a result of the COVID-19 crisis.[100]

96 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*, p. 16.

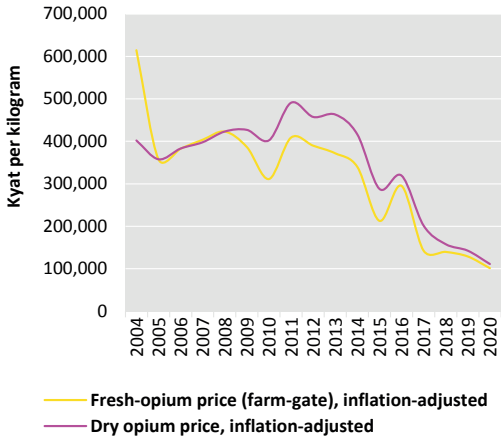
97 UNODC and Afghanistan, National Statistics and Information Authority, *Afghanistan Opium Survey 2019: Socio-economic Survey Report – Drivers, Causes and Consequences of Opium Poppy Cultivation* (February 2021).

98 Ibid.

99 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

100 See booklet 3 of the present report.

FIG. 10 **Inflation-adjusted farm-gate prices (weighted average) of fresh and dry opium in poppy-growing villages, Myanmar, 2004–2020**




Source: UNODC, *Myanmar Opium Survey 2020: Cultivation, Production and Implications* (January 2021).

Nevertheless, the COVID-19-related restrictions appear to have triggered a temporary shortage of buyers and thus a disruption in local trade in opiates at the beginning of 2020,[101] suggesting that opium poppy farmers may continue to face downward pressure on income for their subsistence.[102]

#### Mexico

In contrast to opium cultivation in Afghanistan and Myanmar, the opium harvest in Mexico is staggered over time: there is no single period in the year when a large amount of opium enters the market or when a large labour force is needed. For that reason, the immediate impact of COVID-19-related mobility restriction measures on opium production in Mexico has been rather limited.

The manufacture of heroin in Mexico may not have been heavily affected by the reduction in trade or the availability of chemicals either, since the main precursor, acetic anhydride, can be manufactured in the country. According

101 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

102 UNODC, *Myanmar Opium Survey 2020: Cultivation, Production, and Implications* (January 2021).

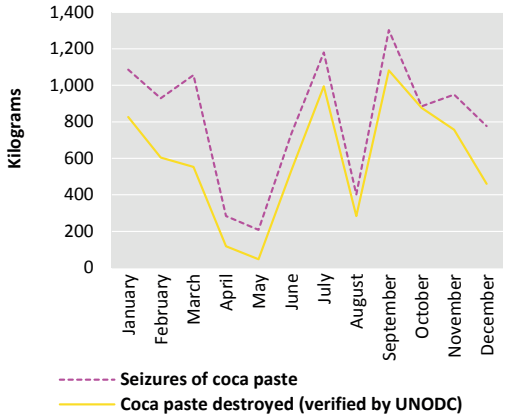
to media sources, the reduced mobility across the border with the United States may, however, have hindered the trafficking of heroin to its main consumer market in that country.[103]

## Coca leaf production and cocaine manufacture

### Bolivia (Plurinational State of)

Assessments based on interviews with key stakeholders in the Plurinational State of Bolivia suggest that the harvesting of coca leaf and the manufacture of cocaine continued throughout the pandemic and was adapted to the change in circumstances.[104] In the initial stages, lockdown measures and mobility restrictions prevented producers from moving coca products from producing areas to markets, resulting in a sharp increase in the price of coca leaf for legal consumption.[105] The disruption in the availability of coca leaf in legal consumer markets was likely reflected also in illicit markets.

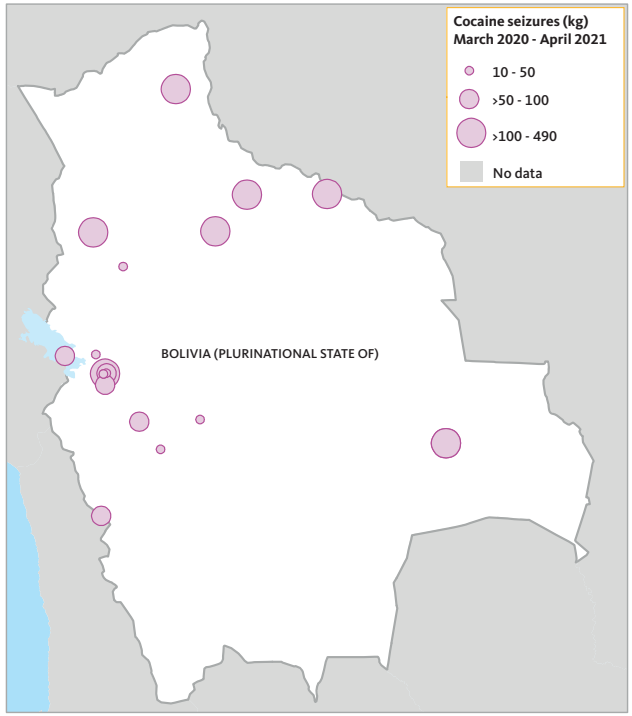
FIG. 11 Quantities of coca paste seized in the Plurinational State of Bolivia, 2020




Source: Government of Bolivia (Plurinational State of) and UNODC.

From March to May 2020, COVID-19-related mobility restrictions in the Plurinational State of Bolivia led to closures of roads, a reduction in air traffic, border closures and increased controls at border crossings. This arguably reduced the options for the concealment and transportation of cocaine by drug traffickers during that period, leading to a disruption in trade between manufacturers and early-stage traffickers. Once lockdown measures were eased, from June 2020 onwards, large-scale drug seizures on land, air and waterway routes were again reported in the country, as had been the case before the lockdown, suggesting that large-scale cocaine trafficking had

MAP 5 Significant cocaine seizures in the Plurinational State of Bolivia, March 2020–April 2021




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

103 Steve Fisher and Kirk Semple, "Hit hard by the pandemic, Mexico's drug cartels tweaked their playbook", *New York Times*, 29 December 2021.

104 UNODC field office assessment based on information on prices, seizures and key informant interviews.

105 Vaca, "Bolo caro: la hoja de coca escasea en Santa Cruz y aumenta más del doble el precio de la libra".

resumed,[106] although the volatility observed in drug interceptions in 2020 may also reflect the impact of the pandemic on law enforcement capacity and priorities.

## Colombia

Reports from Colombia suggest a similar picture to that seen in the Plurinational State of Bolivia; there appears to have been no disruption in coca bush cultivation caused by the pandemic and a short-lived reduction in the sale of coca leaf during the early stage of the pandemic owing to mobility restrictions. The pandemic made it more difficult for traffickers to access coca-growing areas because of increased controls and a higher risk of detection. In some coca-growing areas, non-State actors imposed restrictions on entry into their territories because of COVID-19.[107]

Those initial difficulties caused a substantial decline in coca leaf sales. In the absence of buyers, coca growers processed the harvest to avoid losing the crops. Once they had obtained coca paste, the growers resorted to either of two options: if they were in financial need, they sold cocaine at prices well below normal market rates; if not, they stored the drug in order to sell it once the price increased again.

While earlier reports indicated a shortage of the chemical substances necessary for the processing of coca leaf (e.g., gasoline),[108] farmers reported a continuous supply throughout the initial lockdown, even in the months of the greatest restrictions.[109] Mobility restrictions made it more difficult to divert substances and supplies from the legal coca industry, which led to the manufacture of substances such as sulfuric acid in clandestine laboratories.[110]

When mobility restrictions were gradually lifted, from July 2020, the coca market started to recover and prices slowly rose, returning to pre-COVID-19 levels by the end of 2020. On the basis of preliminary data, the quantity of cocaine seized in Colombia in 2020 appears to have remained at the same level as in 2019,[111] and there are no indications that law enforcement operations were affected by the COVID-19-related measures.

In addition, COVID-19 and the measures to contain it had wider implications for the coca economy in Colombia. For example, school closures throughout 2020 meant that children and youth were often unable to physically attend school, prompting an increased number of 14- to 17-year-olds to drop out and start to harvest and process coca leaves.[112]

Moreover, non-State armed groups increasingly took over State functions in the wake of the spread of COVID-19. Some groups imposed curfews or restricted access for people arriving from outside their respective regions and monitored compliance with quarantine measures for individuals. There was evidence of an increase in confrontations between armed groups for territorial control, for example in Putumayo Department and the Catatumbo region. On the other hand, some groups initiated strategic alliances to guarantee the continuity of drug trafficking.[113]

Less information is available on the cultivation and production of opium, but compared with the figures from 2019, the quantities of heroin seized decreased by 85 per cent in March and April 2020.[114]

## Peru

In Peru, as in the other two countries where cocaine is manufactured, the COVID-19 pandemic affected the coca economy only at the beginning of the pandemic.[115] There was a sharp decrease in the prices of coca leaf, coca paste and cocaine hydrochloride in April 2020, coinciding with the implementation of COVID-19-related mobility restrictions. As in Colombia, this was attributed to the difficulties faced by traffickers in accessing coca-producing areas.[116]

106 UNODC field office assessment based on the collection of qualitative and quantitative information.

107 UNODC field office assessment based on a desk review, key informant interviews and interviews conducted with coca and non-coca farmers in rural areas. An exception was Catatumbo, where local conditions allowed movements of buyers in the area and prices remained stable.

108 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

109 Interviews conducted by the UNODC field office.

110 Policía Nacional de Colombia, Dirección Antinarcóticos, Centro Estratégico de Estudios contra el Narcotráfico, "Incidencia de la cuarentena por COVID-19 en el tráfico de drogas" (2020).

111 Colombian Drug Observatory.

112 Based on interviews conducted by the UNODC field office with farmers in Colombia from July to September 2020.

113 UNODC field office assessment based on the collection of qualitative and quantitative information.

114 Ibid.

115 Peru, Ministry of Interior, "Impacto económico a las redes criminales del tráfico ilícito de drogas en Perú" (July 2020).

116 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

Changes in the price of coca leaf in Peru suggest that the coca economy started to recover during the latter part of 2020 but had not reached pre-COVID-19 levels by the end of the year.[117]

## Manufacture of synthetic drugs

### Americas

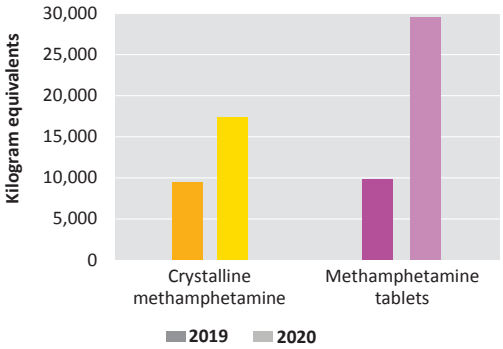
In the Americas, reports from authorities in the United States in late 2020 pointed to an increase in the quantity of methamphetamine and fentanyl manufactured by transnational organized crime groups based in Mexico,[118] some of which have enlisted scientists to manufacture their own precursor chemicals.[119] According to United States sources, the ability of those groups to move large quantities of drugs has remained largely intact despite the pandemic,[120] and the available data suggest that the total quantity of methamphetamine seized in the United States in 2020 was larger than in 2019.[121]

There have been reports of some disruptions in the manufacture of synthetic drugs, particularly fentanyl, due to shortages of precursor substances and other chemicals.[122] However, media reports on several high-profile seizures[123] of synthetic drugs in 2020 indicated that drugs continued to be illicitly manufactured and transported along trafficking corridors between Mexico and the United States. Moreover, reports from United States authorities in early 2021 pointed to a possible expansion of methamphetamine and fentanyl manufacture by transnational organized crime groups based in Mexico.[124]

### East and South-East Asia

In countries in East and South-East Asia, the consolidation of methamphetamine manufacture in the lower Mekong region (Cambodia, Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam), in particular in Myanmar, continued in 2020, as indicated by reports of seizures and clandestine manufacturing in that subregion.

FIG. 12 **Quantities of methamphetamine seized in Myanmar, 2019 and 2020**




Source: Myanmar, Central Committee for Drug Abuse Control.

*Note: Tablets have been converted into kilogram equivalented by using an estimated weight of 90 mg per tablet.*

Large-scale illicit manufacturing of methamphetamine in both tablet and crystalline forms has continued in Myanmar, with no apparent disruptions during the COVID-19 crisis. Indeed, significantly larger quantities of methamphetamine were seized in 2020 than in 2019.[125] The large number of drug seizures made in Myanmar and the lower Mekong countries in general during the pandemic has been primarily attributed to the continued availability of precursors and chemicals in that subregion.[126]

Possibly as a response to COVID-19-related mobility restrictions, organized crime groups appear to have expanded the area of methamphetamine manufacture to include Cambodia, where at least five clandestine synthetic drug laboratories were seized in 2020, whereas no synthetic drug manufacturing sites had been seized between 2015 and 2018.[127] Methamphetamine manufacturing sites may

117 Peru, National Commission for Development and Life without Drugs (DEVIDA), "Monitoreo de precios de hoja de coca y derivados cocaínicos en zonas estratégicas de intervención", Report No. 10 (January 2021).

118 United States, Department of Justice, Drug Enforcement Administration, *2020 National Drug Threat Assessment* (March 2021).

119 Pardo, "Supplying synthetic opioids during a pandemic".

120 Beittel and Rosen, "Mexican drug trafficking and cartel operations".

121 Reference periods are fiscal years, from October to September of the following year. United States, Customs and Border Protection, "CBP Enforcement Statistics Fiscal Year 2019" and "CBP Enforcement Statistics Fiscal Year 2020". Available at www.cbp.gov/.

122 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

123 Seizures recorded in UNODC Drug Monitoring Platform.

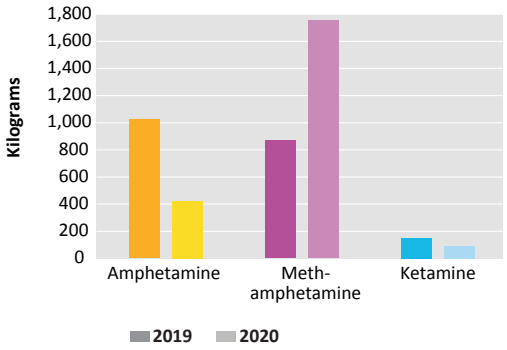
124 United States, Drug Enforcement Administration, *2020 National Drug Threat Assessment*.

125 Myanmar, Central Committee for Drug Abuse Control.

126 UNODC Regional Office for South-East Asia and the Pacific.

127 UNODC, *Synthetic Drugs in East and Southeast Asia: Latest Developments and Challenges* (May 2020); and Cambodia, National Authority for Combating Drugs, "Latest situation on synthetic drugs and

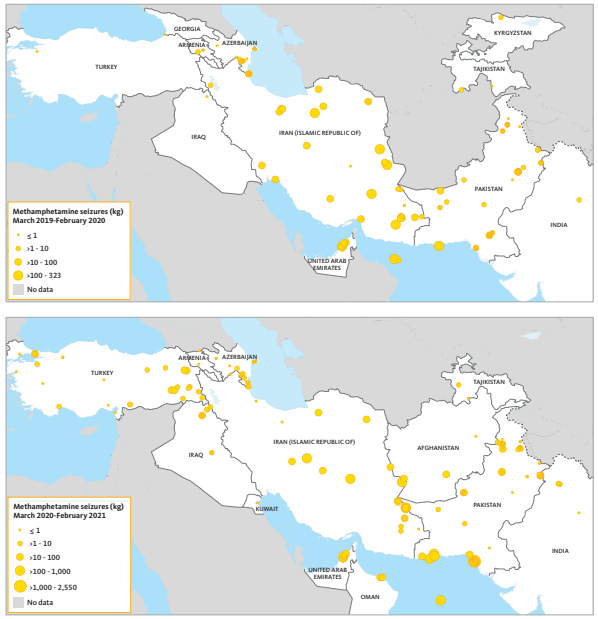
FIG. 13 Quantities of amphetamine, methamphetamine and ketamine seized in Pakistan, 2019 and 2020




Source: Pakistan, Anti-Narcotics Force.

*Note: Data for 2020 are provisional.*

MAP 6 Significant seizures of methamphetamine in selected countries, March 2019–February 2020 and March 2020–February 2021




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Data cover selected countries in Central Asia and Transcaucasia, South-West Asia, Near and Middle East, South-Asia, and Europe. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

have been established in Cambodia as the country is closer to the major consumer markets (e.g., Australia and Japan) than the sites in Myanmar.[128]

Methamphetamine tablet prices in East and South-East Asia have remained largely stable despite the COVID-19 pandemic, while wholesale crystalline methamphetamine prices declined in several countries, including Cambodia, Malaysia and Thailand,[129] supporting the argument that mobility restrictions have not seriously inhibited the availability of the drug.

## South-West Asia

The market for synthetic drugs in South-West Asia has grown in recent years.[130] Continued large-scale seizures and increases in quantities seized in South-West Asia (Afghanistan, Iran (Islamic Republic of) and Pakistan) throughout 2020 suggest that there was no disruption in supply in the subregion.[131] In the Islamic Republic of Iran, large seizures made in 2020 of methamphetamine originating in Afghanistan also indicate that the COVID-19 pandemic has not disrupted the apparent increase in the illicit manufacture of methamphetamine in Afghanistan.[132]

## Europe

In Europe, synthetic drugs such as MDMA and methamphetamine are manufactured on a large scale in countries in Western and Central Europe. The manufacture of MDMA and methamphetamine continued in Belgium and the Netherlands throughout 2020, as evidenced by the number of illicit laboratories dismantled and dump sites

responses to threats in Cambodia", presented at the Global SMART Programme regional workshop held in November 2020.

128 UNODC field office assessment based on the collection of qualitative and quantitative information.

129 Ibid.

130 UNODC, *Synthetic Drugs in East and Southeast Asia*.

131 UNODC, Drugs Monitoring Platform; see booklet 2 of the present report.

132 UNODC, Drugs Monitoring Platform.

reported.[133] However, the pandemic may have had some impact during its initial stages. For example, in the Netherlands, the country where most of the illicit manufacture of synthetic drugs in Europe takes place, it was found that the limited number of legal transportation options and the active presence of law enforcement officers during the initial lockdown periods made it more difficult to dump chemical waste resulting from the illicit manufacture of synthetic drugs.[134] The authorities in Belgium reported that the closure of borders made it more difficult for organized crime groups in the Netherlands to continue transnational drug trafficking between the two countries.[135] The disruption, however, seems to have been only temporary. Traffickers have proved to be resilient and highly dynamic and, according to the police in the two countries, the large-scale manufacture of methamphetamine continued in 2020, as did global exports of the drug.[136]

The decrease in global demand for MDMA may have only partially affected traffickers involved in the manufacture of synthetic drugs in Belgium and the Netherlands. A decrease of more than 20 per cent was observed in the wholesale price of MDMA in the Netherlands in the second quarter of the year, but large shipments did not stop in 2020.[137] Manufacturers of synthetic drugs are versatile and can switch relatively easily between the manufacture of MDMA and methamphetamine. They can therefore adjust to changes in demand for those substances, again showing resilience to drops in demand such as those induced by the COVID-19-related measures.[138]

## The impact of the COVID-19 crisis on transnational drug trafficking varied by region and drug

### Asia

#### South-West Asia

Drug trafficking in South-West Asia (Afghanistan and Iran (Islamic Republic of)) is dominated by opiates originating in Afghanistan, as well as methamphetamine and cannabis. Based on seizure data, COVID-19-related measures do not appear to have significantly impacted drug trafficking within South-West Asia.

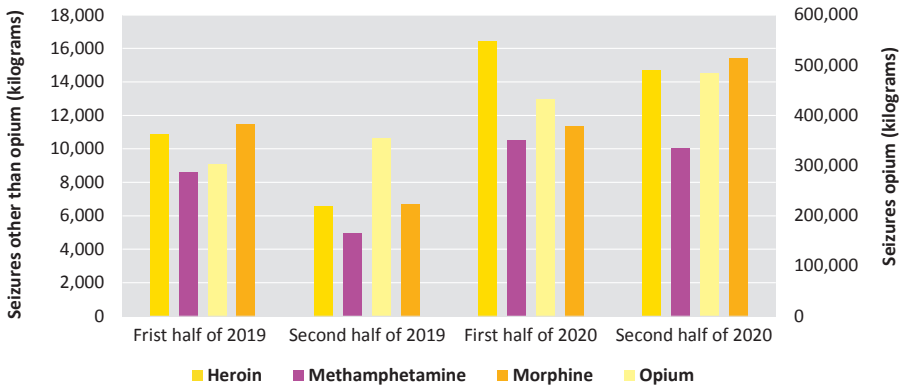
In Afghanistan, limited lockdown measures were implemented at the beginning of the pandemic,[139] with some border crossings, such as the Spin Boldak border crossing with Pakistan, being closed to passengers, but not to cargo[140] and other cross-border trade in goods, the main method for trafficking opiates out of Afghanistan, albeit with lower capacity than previously.[141] A number of unofficial border crossing points in Afghanistan, such as the ones at Bahram Chah (Helmand Province) and Sasobi (Nangarhar Province), were not subject to any restrictions during the pandemic.[142] The closure of Kabul International Airport to passengers until the beginning of July 2020, however, may have impeded the use of air couriers for trafficking opiates to countries such as India.

Despite – or perhaps because of – restrictions and increased controls at its borders, the Islamic Republic of Iran seized almost 600 tons of different types of drugs in the first half of 2020, an increase of 36 per cent compared with the same period in the previous year. That increase suggests that drug trafficking across the country's eastern border did not decline. The number of seizure operations conducted decreased by 16 per cent over the same period, suggesting that larger drug shipments were being detected than before the pandemic.[143]

Over the course of 2020, the Islamic Republic of Iran seized 41 per cent more opiates than in the previous year, mostly in the form of opium (94 per cent); heroin seizures even increased by 79 per cent from 2019 to 2020.[144] The increased level of interception in the Islamic Republic of Iran may have reduced the supply of opiates along the Balkan route, as also suggested by the decline in seizures in Turkey during the same period.

133 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*.
134 Netherlands Politie, Intelligence Centre, Central Coordination Intelligence, "Information report update: COVID-19 pandemic".
135 UNODC meeting with law enforcement experts from Belgium and the Netherlands on the impact of COVID-19 on ATS manufacture, 22 February 2021.
136 EMCDDA, *New Psychoactive Substances: Global Markets, Global Threats and the COVID-19 Pandemic*.
137 UNODC meeting with law enforcement experts from Belgium and the Netherlands on the impact of COVID-19 on ATS manufacture, 22 February 2021.
138 UNODC, *Global Synthetic Drugs Assessment 2020*.
139 Afghanistan, Office of the Deputy Minister for Counter Narcotics, Ministry of Interior, "Impact of COVID-19 on the drug situation in Afghanistan" (August 2020).
140 WorldAware, "COVID-19 alert: Afghanistan continues imposing restrictions through early September", 1 September 2020.
141 David Mansfield, "Business as usual: the uninterrupted illicit supply chain across the borders of Afghanistan", 5 May 2020; and EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*, p. 16.
142 Mansfield, "Business as usual: the uninterrupted illicit supply chain across the borders of Afghanistan".
143 Islamic Republic of Iran, Drug Control Headquarters.
144 Ibid.

FIG. 14 Quantities of drugs seized in the Islamic Republic of Iran, 2019 and 2020




Source: Islamic Republic of Iran, Drug Control Headquarters

Throughout the pandemic, large-scale seizures have continued in Pakistan and do not even appear to have declined during the initial lockdown. In fact, the quantity of heroin and illicit morphine seized during the first five months of 2020 was 27 per cent larger than the entire quantity intercepted in 2019.[145] However, the number of seizure cases decreased by 65 per cent when comparing the same time periods,[146] suggesting that drug trafficking organizations began to move larger shipments in 2020.

In late April, two large shipments (700 kg of heroin and 80 kg of opium) were intercepted in Pakistan at the border of Afghanistan[147] on a container ship bound for Antwerp, Belgium.[148, 149] In October 2020, during another lockdown period, large amounts of various drugs were also seized across the country. One media source reported that drugs worth $79 million were seized in 16 operations during that month.[150] Moreover, the quantity of methamphetamine seized in Pakistan in 2020 more than doubled compared with 2019.[151]

145 UNODC/HONLAP/44/CRP.17.
146 UNODC/HONLAP/44/CRP.17 (figures for 2020 are based on preliminary data).
147 UNODC, Drugs Monitoring Platform.
148 Ibid.
149 Pakistan, National Initiative against Organized Crime, "Weekly review of organized crime and pandemic, 11–17 April 2020", 18 April 2020.
150 Express Tribune, "$79m worth of drugs were seized by the ANF during 16 operations", 30 October 2020, e-paper.
151 Ibid.

### South Asia

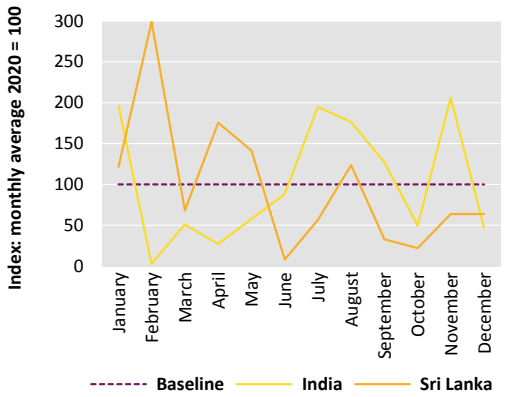
COVID-19-related restrictions do not seem to have affected the interception of heroin flows in South Asia. In India, the quantity of heroin seized during the first four months of 2020 (about 1 ton) was a third of the total quantity seized in the previous year, suggesting a level of supply or interdiction similar to that observed in 2019.[152]

In Bangladesh, police informed the media about an increase in the quantities seized and in arrests of drug trafficking suspects despite the lockdowns, the closure of borders and the fact that rates of other forms of crime had dropped.[153]

Sri Lanka also saw an increase in the quantity of heroin intercepted, largely in its territorial and international waters. In 2019, the country set a historical record for the quantity of heroin seized, which rose from 739 kg in 2018 to 1,742 kg,[154] and the amounts seized in the first three months of 2020 already surpassed the total quantity seized in 2018.[155]

152 Response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.
153 Kamal Talukder, "Illicit drug trade thrives in Bangladesh amid coronavirus pandemic", *bdnews24.com*, 27 May 2020.
154 UNODC, responses to the annual report questionnaire for the years 2010–2017.
155 Response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

FIG. 15 **Change in the quantities of heroin seized in India and Sri Lanka, with baseline January 2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

### Central Asia and Transcaucasia

COVID-19-related restrictions seem to have had different impacts in Central Asia and Transcaucasia. In Central Asia, the quantities of opiates seized decreased uniformly across countries in the first half of 2020 as compared with 2019, reportedly because of a change in trafficking flows. In Transcaucasia, by contrast, the quantities seized increased, possibly as a result of an increase in detection.

While a decrease of almost 40 per cent in the number of drug seizure cases was reported in Azerbaijan in the first half of 2020, there was an increase in the quantities of drugs seized compared with the same period in 2019; for example, the quantity of heroin seized in the country nearly doubled, from 746 kg in the first half of 2019 to 1,427 kg in the same period in 2020.[156] This suggests that traffickers may be transporting an increasingly large volume of drugs in each shipment, but it has also been argued that the implementation of quarantine and restriction measures contributed to an increase in the detection of illicit drug shipments in the subregion.[157] Indeed, large seizures of heroin in Azerbaijan at the border with the Islamic Republic of Iran during the first half of 2020 (e.g., 144 kg, 137 kg, 545 kg and 101 kg in June 2020), destined for markets in the European Union and Ukraine,[158] suggest that there continued to be a high level of activity along that trafficking route, including along the branch through the Caucasus, despite the COVID-19-related measures.

In Central Asian countries, the impact of COVID-19-related restrictions seems to have been different. In Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, quantities of opiates seized declined during the first half of 2020 compared with the same period in 2019; this development was attributed to a reduction in supply rather than in interdiction capacity.[159] In Kazakhstan, owing to difficulties in obtaining controlled substances from abroad, drug trafficking groups have actively tried to organize the illicit manufacture of synthetic drugs within the country, especially in regions where demand is the strongest.[160]

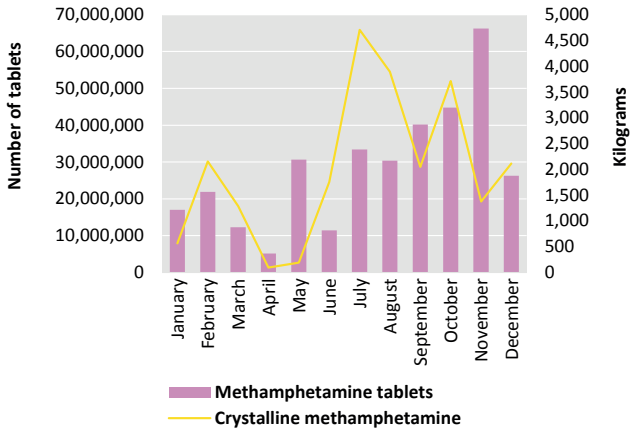
### East and South-East Asia

The COVID-19 pandemic has had a mixed impact on drug trafficking in countries in East and South-East Asia, depending on their location, the presence of (large-scale) drug production and the type of substances consumed. In Thailand, for example, quantities of methamphetamine seized declined during the first half of 2020, possibly as a result of lockdown measures. In Myanmar, early reports indicated that opiate producers had difficulties in finding buyers for their products, while law enforcement activities continued uninterrupted, as one major drug seizure operation showed.[161] A noticeable disruption in methamphetamine trafficking from South-East Asia to Australia, New Zealand and Japan was reported, but overall drug trafficking in the subregion was not disrupted and large-scale methamphetamine trafficking continued.

Drug traffickers adapted quickly by changing trafficking routes and concealment methods. As COVID-19-related restrictions on mobility began to be eased, between May and August 2020 there were at least 12 seizures of crystalline methamphetamine exceeding 1 ton in the Golden Triangle.[162] Partial data for 2020[163] show that the quantity

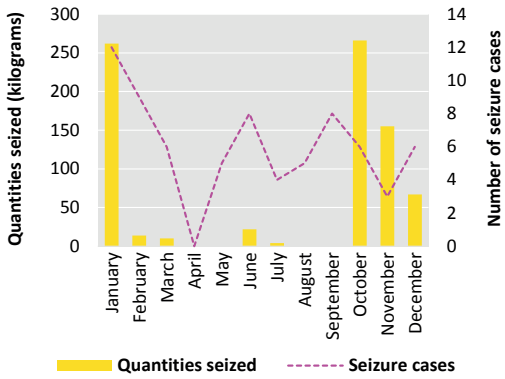
156 CARICC, Information Bulletin, No. 216 (September 2020).
157 CARICC, Information Bulletins, Nos. 211–217.
158 Ibid.
159 Ibid.
160 CARICC, Information Bulletin, No. 213 (September 2020).
161 Myanmar, Office of the Commander-in-Chief of Defence Services.
162 UNODC elaboration based on a press release and official briefings by the Central Committee for Drug Abuse Control of Myanmar, and the Office of Narcotics Control Board of Thailand.
163 Available preliminary data from Brunei Darussalam, Cambodia, China, Hong Kong, China, Taiwan Province of China, Indonesia, Japan,

FIG. 16 Quantities of crystalline methamphetamine seized, Thailand, 2020




Source: Thailand, Office of the Narcotics Control Board.

FIG. 17 Seizures of methamphetamine by the customs authority, Japan, 2020




Source: Japan customs, "Summary of Japan Customs' Enforcement in 2020" and monthly reports, February 2021.

*Note: Figure only includes seizures cases of more than 500 g or 500 tablets.*

of methamphetamine seized in 2020 exceeded the quantity seized in 2019 in the subregion. Together with the declining wholesale prices and stabilizing retail prices of methamphetamine, this suggests that mobility restrictions related to the COVID-19 pandemic have not disrupted the ongoing expansion of the methamphetamine market in East and South-East Asia.[164] The continued availability of the drug in the region may have been due to an increase in its manufacture in the subregion and an oversupply resulting from mobility restrictions, as methamphetamine could not be smuggled to the usual destination countries, such as Australia, Japan and New Zealand. In Australia and New Zealand, the price of methamphetamine actually increased,[165] indicating some degree of supply disruption.

In Thailand, monthly seizure data for 2020 indicated a decline in the quantity of methamphetamine seized during the first half of the year, possibly as a result of mobility restrictions. Once restrictions were eased, however, seizures returned to and in some cases exceeded 2019 levels, showing that drug trafficking organizations were able to adapt to the circumstances.[166] This also suggests that law enforcement authorities may have had less capacity to combat drug trafficking when the restrictions were imposed.[167]

The "western maritime route" that connects methamphetamine manufacturers in Myanmar to destination markets across the region and beyond has also gained importance during the pandemic. Traffickers may be exploiting a perceived gap in law enforcement, as surveillance in that part of the region is limited. As for the methods employed, traffickers transfer drugs from ship to ship, then engage in barter trade and use pick-and-drop methods."[168]

the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, the Republic of Korea, Singapore, Thailand and Viet Nam showed that approximately 169 tons of methamphetamine had already been seized, compared with the roughly 143 tons seized during the whole of 2019.

164 Data made available to the UNODC Regional Office for Southeast Asia and the Pacific; National Authority for Combating Drugs of Cambodia; Central Committee for Drug Abuse Control of Myanmar; and Office of Narcotics Control Board of Thailand.

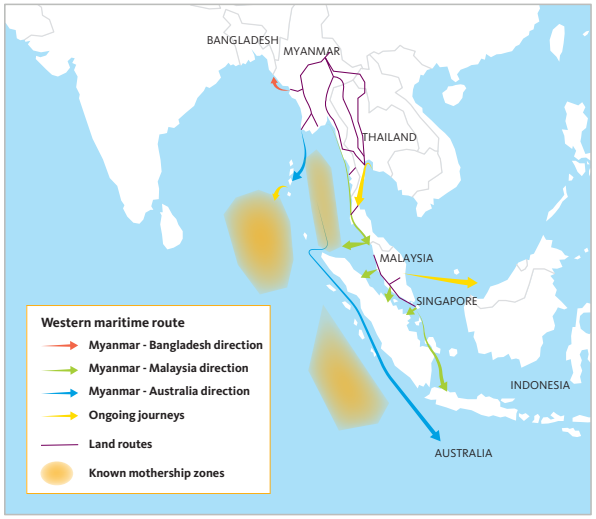
165 New Zealand, National Drug Intelligence Bureau, "Illicit drug assessment: November 2020" (2020).

166 UNODC field office assessment based on the collection of qualitative and quantitative information.

167 Thailand, Office of Narcotics Control Board, "Latest situation on synthetic drugs and responses to the threats in Thailand".

168 UNODC, "The pandemic effect: the impact of COVID-19 on drug trafficking in the maritime domain", Western Maritime Route Forum briefing note, Initiative of the Global Maritime Crime Programme (January 2021).

**MAP 7 Western maritime route for trafficking methamphetamine**




Source: UNODC, "The pandemic effect: the impact of COVID-19 on drug trafficking in the maritime domain", Western Maritime Route Forum briefing note, Initiative of the Global Maritime Crime Programme (January 2021).

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

## Europe

In Europe, which is an important consumer market for almost all types of drugs, countries imposed restrictions on mobility during the initial phase of the pandemic and thereafter. Reports on the impact of these restrictions on drug trafficking in Europe paint a mixed picture. Some countries, for example in the European Union,[169] reported only few or no disruptions, while others saw a stronger, albeit mostly temporary, effect.

According to seizure data, cocaine trafficking using maritime shipping containers continued in 2020, possibly at an even higher level than in 2019. This suggests that there was little or no disruption in cocaine trafficking to Europe during the initial phase of the pandemic.[170] Belgium reported a large seizure of cannabis resin at the port of Antwerp at the end of March 2020, suggesting that traffickers may have diverted cannabis resin during the pandemic and used maritime routes to avoid the "classic" Morocco-Spain-France-Belgium route.[171]

One possible change was an increase in the quantity of cocaine smuggled per shipment, with early assessments indicating that seizures of cocaine destined for Europe were larger than usual.[172] The COVID-19 pandemic may have accelerated the trend towards increasingly large shipments of cocaine, cannabis resin and heroin being transported by sea, often in intermodal containers.[173]

Reports from late 2020 suggested that transnational criminal organizations based in Mexico were expanding their cocaine trafficking activities to Europe by transporting bulk shipments in private aircraft to small airports in Italy and then trans-shipping the drugs to other parts of the country.[174]

As a consequence of the interruptions in air travel, drug traffickers who previously relied on air transport for trafficking drugs (*in corpore*, using body packs, or in luggage or by means of corrupt airline personnel) have been the most severely affected. However, the interruptions had a negligible impact on large-scale drug trafficking in Europe because private air travel normally accounts for only a limited share of the overall supply of drugs in the region.[175]

In the European Union, seizures and intelligence data do not suggest a disruption to major drug trafficking activities that rely on methods other than commercial flights and other forms of public transport. In addition, the movement of bulk quantities of drugs across borders has continued, despite the introduction of border controls, as a result of the continuing commercial transportation of goods throughout the European Union. However, temporary shortages of drugs and increased prices have been observed in some countries.[176]

With regard to heroin trafficking, the COVID-19-related restrictions do not appear to have significantly altered

169 Europol, "How COVID-19-related crime infected Europe during 2020" (November 2020).

170 Ibid.

171 Report submitted by Belgium in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

172 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

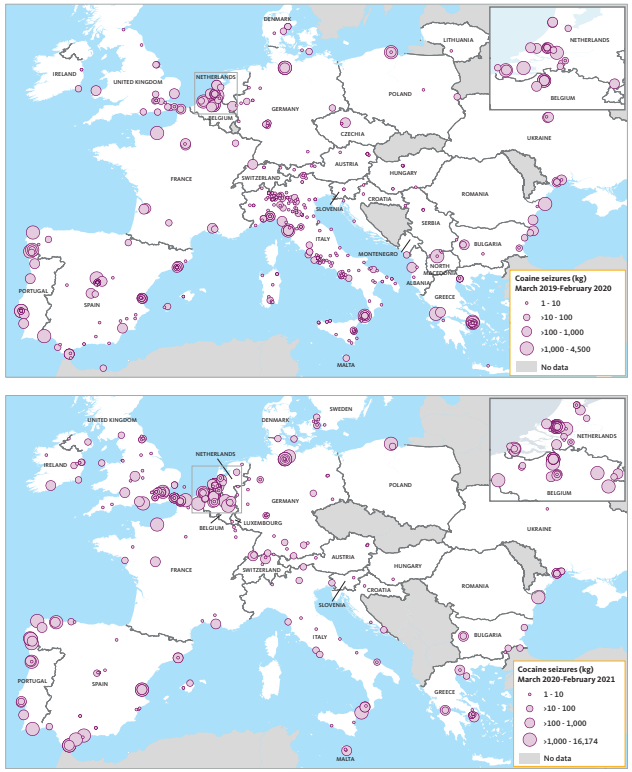
173 EMCDDA, *European Drug Report 2020*.

174 Italy, Direzione Centrale Per I Servizi Antidroga, Operazione Halcon, Guardia di Finanza di Catania, "7 misure restrittive per traffico internazionale di cocaina: supporto e collaborazione della D.C.S.A", 14 February 2020.

175 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*.

176 EMCDDA, *European Drug Report 2020*.

**MAP 8 Significant individual seizures of cocaine in Europe, March 2019–February 2020 and March 2020–February 2021**




Source: UNODC, Drugs Monitoring Platform.

*Note: Cocaine seizures exceeding 1 kg. The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

trafficking via the Balkan route, the world's most important heroin trafficking route, which connects Afghanistan to markets in Western and Central Europe through the Islamic Republic of Iran, Turkey and the Balkan countries in South-Eastern Europe. An increase in the quantities of heroin seized in the Caucasus suggests that the branch of the Balkan route that crosses that region may have increased in importance.[177]

177 See earlier discussion in the present booklet and UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

Reports from South-Eastern Europe,[178] an entry point for heroin destined for countries in Western and Central Europe, suggested an initial, temporary decrease in drug trafficking activities during the early stages of the pandemic. Later assessments,[179] however, pointed to a normalization of the situation, with no major impact observed on drug trafficking activities.

In 2019, Turkey, which consistently seizes more heroin than any other European country, reported seizures of slightly more than 20 tons of heroin,[180] a record level of interception. During the whole of 2020, Turkish authorities seized 13.2 tons of heroin,[181] which represents a 35 per cent decrease compared with 2019. Of the total for 2020, 4.5 tons[182] of heroin were seized in the first half of the year, while the remainder was seized in the second half.[183]

The reasons for the overall decline in the quantities of heroin seized in Turkey in 2020 could be multifaceted, but the COVID-19 pandemic may be one of the influencing factors, in particular in the decline seen in the first half of 2020. The substantial increase in the quantity of heroin seized in the Islamic Republic of Iran may have disrupted or broken part of the supply chain and, together with the increased flow of heroin through the Caucasus, may have resulted in smaller quantities of heroin passing through Turkey. Irrespective of the quantity trafficked, traffickers may also have changed routes, as the Turkish National Police were quoted by the media as stating that the closure of land and air borders between the Islamic Republi c of Iran and Turkey may have diverted drug trafficking to maritime routes.[184]

The Russian Federation reported in broad terms that, in the first quarter of 2020, the number of drug-related offences investigated in the context of organized crime had increased by 22 per cent and the number of offences committed had risen by 23 per cent compared with the

178 Report submitted by Albania, Bulgaria and Serbia in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

179 UNODC Regional Programme Office for South-Eastern Europe.

180 Turkish Ministry of Interior. Available at https://icisleri.gov.tr/terorun-finansmani-uyusturucuya-2019-yilinda-agir-darbe-vuruldu.

181 Verified Twitter Account of Turkish Ministry of Interior. Available at https://twitter.com/TC_icisleri/status/1346490705959653376/photo/1.

182 Ibid.

183 Ibid.

184 Iran Press, "Iranian, Turkish anti-narcotics police chiefs stress bilateral cooperation", 24 October 2020.

figures for the first quarter of 2019. The same trend was observed in the quantities of drugs seized, which almost doubled over the same time period. At the end of May 2020, the Russian Federation reported on the impact of the COVID-19 pandemic that "overall, the drug situation in the Russian Federation has not undergone any significant changes".[185] By September 2020, the Russian Federation had reportedly experienced a reduction in the number of drug crimes and people detained for drug law offences as well as an increase in the number of drug crimes committed with the help of digital technology.[186]

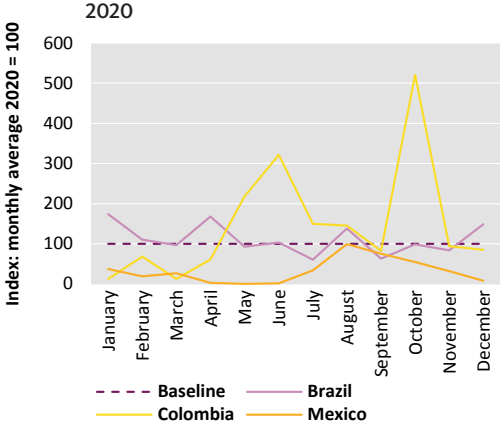
According to information collected from sites (both marketplaces and discussion forums)[187] on the dark web and the open Internet, also known as the clear web, in Eastern Europe, COVID-19-related measures led to a halt in the trafficking of synthetic cathinones (in particular alpha-PVP) from the Russian Federation to Belarus and Kazakhstan and a complete disruption of the supply of synthetic cathinones (in particular mephedrone and *alpha*-PVP) from Central Asia to those countries. The supply of *alpha*-PVP from Ukraine to the Republic of Moldova and the supply of methadone from Ukraine to Belarus were also affected. After the removal of quarantine and self-isolation measures and the opening of borders, the sale of psychoactive substances in those countries began to rise and approach pre-crisis values. The speed at which online drug markets recovered and the extent of the disruption depended on the size of the market before the onset of the crisis.

## Americas

### Latin America

Drug trafficking in the Americas was affected during the first months of the pandemic because of a decrease in supply from countries where drugs are manufactured. Nevertheless, drug trafficking resumed shortly after mobility restrictions were eased, and sharp increases in the quantities of drugs seized indicated that traffickers were catching up on business and clearing their stockpiles after a break of several months.

FIG. 18 **Trends in quantities of cocaine seized, based on individual seizures, selected countries, 2020**




Source: UNODC, Drugs Monitoring Platform.

*Note: To highlight the trends, the quantities of cocaine seized are shown in relation to the average monthly amounts seized in the three countries. The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

Several countries in Latin America, including Bolivia (Plurinational State of), Brazil, Colombia, Ecuador and Panama, reported shifts in drug trafficking routes and the greater use of maritime routes and of private aircraft, often using illegal runways.[188] Those shifts were arguably triggered by border closures and difficulties in trafficking cocaine by land, as well as by a reduction in commercial air travel. Ecuador in particular reported an increase in the use of speedboats by drug traffickers attempting to avoid detection by maritime police.[189] In Brazil, there was an increase in seizures of drugs on roads from mid-2020 onwards, caused by various factors, such as new law enforcement strategies and a decrease in road traffic due to the COVID-19 pandemic.[190]

Some countries in the region, including Bolivia (Plurinational State of), Colombia and Panama, saw declines in quantities of drugs seized in the second and third quarters of 2020, possibly as a consequence of disruptions in the

185 Response by the Russian Federation to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

186 CARICC, Information Bulletin, No. 217.

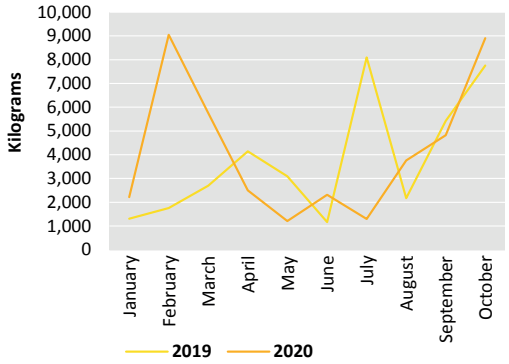
187 *UNODC Regional Programme Office for Eastern Europe;* DrugStat, Исследования влияния COVID-19 на интернет-наркоторговлю в странах ВЕЦА, 2020.

188 UNODC field office assessment based on the collection of qualitative and quantitative information; and UNODC, Response to the CRIMJUST annual meeting pre-assessment questionnaire, November 2020.

189 Ibid.

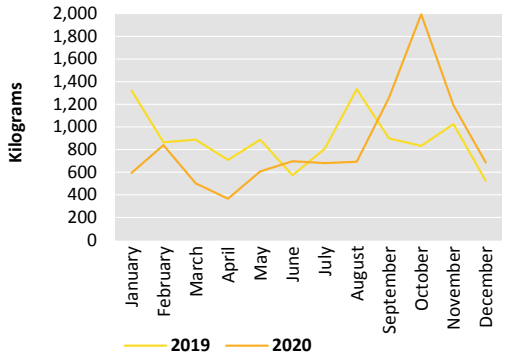
190 Brazil, Federal Highway Police.

FIG. 19 Quantities of drugs seized per month, Panama, January to October 2019 and 2020




Source: UNODC, Response by Panama to the CRIMJUST annual meeting pre-assessment questionnaire, November 2020.

FIG. 20 Quantities of cocaine seized along the south-west border, United States, 2019 and 2020

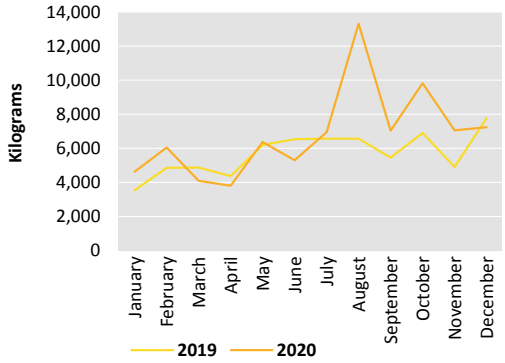



Source: United States Customs and Border Protection, "Drug seizure statistics". Available at www.cbp.gov/.

supply of drugs in the second quarter.[191] In Chile, quantities of cocaine hydrochloride and coca paste seized were 39 per cent lower between mid-March and mid-April compared with the same period in the previous year.[192] Argentina reported a drastic reduction in drug seizures related to commercial flights and an increase in the use of mail services for small- and medium-scale illicit drug shipments.[193] Brazil observed an overall increase in seizures made in its ports, which was attributed to an increase in controls.[194] No major disruptions in cocaine trafficking were observed in Brazil. Throughout the pandemic, seizures continued at a large scale and cocaine prices remained stable,[195] indicating that the supply chain was resilient to shocks, possibly owing to the existence of drug inventories.

Individual seizure data from Mexico pointed to a possible reduction in the quantities of cocaine seized in the country in the first half of 2020, followed by an uptick later in the year.[196] This is arguably a consequence of disruptions

FIG. 21 Quantities of methamphetamine seized along the south-west border, United States, 2019 and 2020



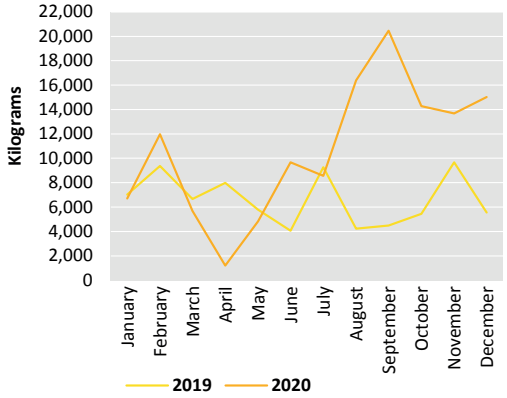

Source: United States Customs and Border Protection, "Drug seizure statistics". Available at www.cbp.gov/.

in flows of cocaine northwards to markets in the United States and Canada.

In the Plurinational State of Bolivia, drug trafficking and criminal activities continued after the initial disruptions caused by the pandemic, as drug traffickers adapted to the changing conditions. Once the measures to contain

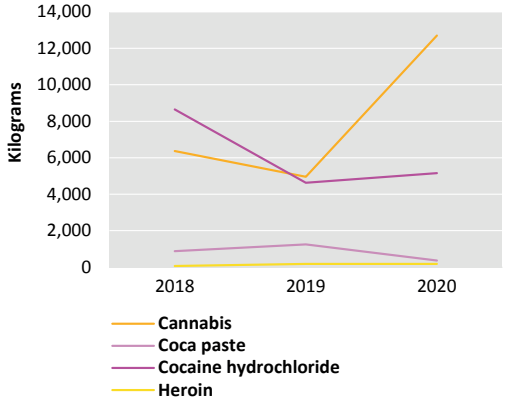
191 UNODC, Response to the CRIMJUST annual meeting pre-assessment questionnaire, November 2020.
192 Report submitted by Chile in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.
193 UNODC, Response to the CRIMJUST annual meeting pre-assessment questionnaire, November 2020.
194 Ibid.
195 UNODC field office assessment based on the collection of qualitative and quantitative information.
196 UNODC, Drugs Monitoring Platform.

FIG. 22 Quantities of drugs seized per month, Ecuador, 2019 and 2020




Source: Government of Ecuador.

FIG. 23 Quantities of drugs seized at the northern border of Ecuador, 2018–2020




Source: Government of Ecuador.

COVID-19 were eased, large-scale drug seizures resumed across all established land, air and waterway drug trafficking routes.

During the first quarter of 2020, before the introduction of restrictive measures, an upward trend was observed in quantities of drugs seized in the Plurinational State of Bolivia, but the situation soon changed once measures to contain COVID-19 were implemented.[197] After June 2020, with the relaxation of the restrictions, quantities of drugs seized increased sharply, possibly indicating that traffickers were clearing their drug stockpiles. In terms of drug trafficking routes, the shift observed since 2019, towards using the 3,400 km of uninterrupted rivers that connect the country to the Atlantic Ocean through the Paraguay-Paraná waterway system, was consolidated in 2020.[198]

In Colombia, an increase in cocaine trafficking by sea was noted during the initial lockdown, in particular by semi-submersibles, container cargo and speedboats to countries in Central America. Similarly, illegal flights using small aircraft also appear to have increased.[199] In the second half of 2020, once some of the restrictions had been eased, a greater number of drug seizures was observed, indicating that the trafficking of cocaine was soon resumed.[200] Some changes in trafficking routes were also observed; for example, to avoid increased controls, traffickers increasingly focused on Brazil as a platform for shipping cocaine to Europe, rather than on trafficking routes across the Pacific and the Caribbean.[201]

Seizure data from Ecuador indicate that, despite a slowdown in trafficking right after the first lockdown, there has been an increase in drug trafficking and/or in the interdiction capacity of drug law enforcement agencies in 2020. In 2020, 128 tons of drugs were seized in Ecuador, some 61 per cent more than in 2019.[202] The decrease in the quantities of drugs seized during the first months of the lockdown may be explained by a decrease in drug trafficking activities, by a reduction in the capacity of law enforcement due to the need to enforce restrictive measures and by a reprioritization of policy resources towards the public health emergency. In mid-May 2020, when the initial lockdown was coming to an end and the measures

197 UNODC field office assessment based on the collection of qualitative and quantitative information.
198 Ibid.
199 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
200 UNODC field office assessment based on the collection of qualitative and quantitative information.
201 Colombian National Police, Anti-Narcotics Directorate, Strategic Center for Drug Trafficking Studies, "International drug trafficking a resilient activity" (2020).
202 Government of Ecuador.

became more flexible, drug trafficking and law enforcement activities increased again. The quantities of drugs seized increased, which has been attributed to the clearance of drug inventories amassed under the COVID-19-related restrictions.

### North America

In the United States, the COVID-19 pandemic has had a mixed impact on drug trafficking.[203] In the case of opioids, a decrease in the availability of fentanyl and an increase in heroin prices were observed in some of the areas monitored, while little or no change in the market was observed in the other areas.

Reportedly, methamphetamine trafficking has been affected more than trafficking in other drugs, with methamphetamine prices increasing in many areas of the country. However, the impact of COVID-19-related restrictions on precursor substances and drug availability has been limited, suggesting that drug trafficking organizations have capitalized on the pandemic as an opportunity to increase drug prices.

In the case of cocaine, it has been found that the COVID-19 pandemic has had an impact on "multiple nodes of the cocaine trafficking supply line"[204] but has not significantly reduced the overall supply of cocaine to the United States. This has been explained by continued maritime smuggling and the adaptation of drug trafficking organizations to the changes in circumstances, such as increased border controls.

## Africa

### West and Central Africa

There is some evidence that drug traffickers have made changes to their trafficking routes and modi operandi in West and Central Africa during the COVID-19 pandemic. In response to COVID-19-related measures, drug traffickers have increasingly made use of courier and postal services.[205] They have also adapted to the timing of curfews by camouflaging drugs in food deliveries, moved their operations to maritime routes, and shifted drug trafficking routes.

The interception of two containers containing tramadol in July and August 2020 revealed a different route – through Europe – for the smuggling of the substance from Asia to West and Central Africa, as the drugs seized originated in Pakistan and passed through Germany on the way to their final destination in Nigeria.[206] Prior to the spread of COVID-19, the most observed transit route for tramadol to West and Central Africa was through Cotonou, Benin, with Nigeria as the final destination. In Niger, an increase in the use of waterways to traffic drugs was observed.[207]

In May 2020, the Nigerian authorities seized the largest quantity of cannabis ever seized in Nigeria, worth over $3 million.[208] The suspected provenance of the drugs was Ghana, and they had passed through other countries by maritime routes before being seized.

The trend towards larger shipments of cocaine, as seen in other regions, has also been observed in West and Central Africa, with the Gambian authorities making a record seizure of 3 tons of cocaine on a cargo ship from Ecuador in January 2021.[209] On 21 March 2021, the French navy seized 6 tons of cocaine in international waters close to Côte d'Ivoire on a ship coming from Brazil.[210]

Drug trafficking by air in West and Central Africa was only temporarily affected at the beginning of the pandemic. Seizures made at Nigerian airports after commercial flights resumed in September 2020 suggest that drug trafficking probably resumed to an even greater extent than before. Between September and December 2020, more than 1 ton of drugs were seized by the National Drug Law Enforcement Agency of Nigeria, in particular at the international airports in Lagos and Abuja.[211]

### East Africa

With its position on the "southern route" for smuggling opiates from Afghanistan, the coast of East Africa has gained in importance in the global illicit trade in heroin in recent years. Illicit drug flows, usually ultimately bound

203 United States, Drug Enforcement Administration, *2020 National Drug Threat Assessment*.
204 Ibid.
205 UNODC field office assessment based on the collection of qualitative and quantitative information.
206 UNODC, Drugs Monitoring Platform.
207 UNODC field office assessment based on the collection of qualitative and quantitative informationice.
208 UNODC, Drugs Monitoring Platform.
209 Reuters, "Gambia seizes 3 tonnes of cocaine in one of West Africa's largest busts", 9 January 2021.
210 UNODC, Drugs Monitoring Platform.
211 UNODC field office assessment based on the collection of qualitative and quantitative information.

for Europe, typically cross the sea from the Makran Coast to the coastal countries of East Africa.[212]

Seizures in the United Republic of Tanzania pointed to an increase in the quantities of drugs trafficked through the country during the pandemic. For example, in April, more heroin was intercepted in one single seizure (270 kg)[213] than the average quantity of heroin seized in the country (200 kg) each year during the period 2010–2017.[214]

Drug trafficking seemed to have continued in Mozambique after the first phase of the 2020 lockdown. Just after the country had decreased its alert level in September 2020,[215] both national and foreign suspects who were reported to have been routinely smuggling heroin across the border between Mozambique and the United Republic of Tanzania were arrested in Dar es Salaam with 51 kg of heroin in their possession.[216] One month later, in one of the largest drug seizures ever recorded in Mozambique, 158 kg of heroin and 185 kg of "crack" cocaine were seized there.[217]

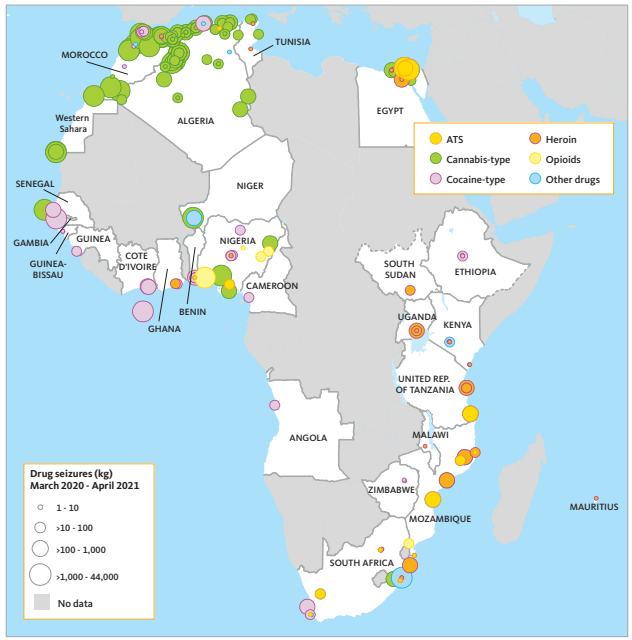
No significant heroin seizures have been reported by Kenya during the pandemic, although it is a transit country[218] on a well-established drug trafficking route. One possible explanation for the small number of opiate seizures in 2020 is a reduction in drug trafficking as a result of an increase in government control and lockdown measures, including dusk-to-dawn curfews that may have disrupted supply routes and generally made it more difficult for traffickers to move drugs.[219]

### Middle East and North Africa

In the Middle East and North Africa, under the initial lockdown measures imposed between March and June 2020, drug trafficking groups appear to have changed their modi operandi to adjust to a reduction in the number of commercial flights and ferry transports, as well as to an increase in border controls.[220] From July 2020 onwards, lockdown measures of varying intensity were in place in different countries, leading to changes in seizure patterns. For example, seizures at airports were made much more frequently in countries such as Egypt and Tunisia, where air traffic recommenced in June 2020, than in countries where commercial flights were still operating at a reduced level.[221]

Countries in North Africa have observed an increase in drug trafficking along maritime routes, indicating that the increasing trend towards using North Africa as a

**MAP 9 Significant drug seizures in Africa, March 2020–April 2021**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

212 Simone Haysom, Peter Gastrow and Mark Shaw, *The Heroin Coast: A Political Economy along the Eastern African Seaboard*, Research Paper, No. 4 (June 2018); UNODC, *The Afghan Opiate Trade and Africa: A Baseline Assessment 2016* (Vienna, 2016).

213 UNODC, Drugs Monitoring Platform.

214 UNODC, responses to the annual report questionnaire for the years 2010–2017.

215 UNICEF, "Mozambique COVID-19 situation report No. 9: 27 August–25 September 2020" (October 2020).

216 UNODC, Drugs Monitoring Platform.

217 Ibid.

218 UNODC, *The Afghan Opiate Trade and Africa*.

219 Mohamed Ahmed, "Kenya: how COVID-19 restrictions have disrupted drugs trade", *Daily Nation*, 11 November 2020.

220 UNODC field office assessment based on the collection of qualitative and quantitative information.

221 Ibid.

transit region for maritime drug trafficking has continued during the pandemic. In Morocco, for example, an increase in quantities of cannabis resin seized in 2020 compared with 2019 was observed, and most of it was seized in containers at the country's main ports.[222] In January 2021, two major shipments of cocaine destined for Morocco were seized in Colombia and Brazil, amounting to 1,539 kg and 460 kg, respectively.[223] However, the increasing use of maritime trafficking routes should be interpreted in the context of the growing importance of those routes in North Africa over the past few decades, not only for cannabis, but also for cocaine.

There are also indications that drug trafficking activities on existing routes, such as the southern cannabis trafficking route, across the Sahel, may have been scaled up in places where national borders are more permeable.[224]

An increase in seizures of synthetic drugs in North Africa has also been reported. In Egypt, for example, the quantities of "Voodoo" and "Strox"[225] seized during the second half of 2020 were larger than in the past.[226] Likewise, the Egyptian authorities reported an increase in the size of seizures of "captagon" and crystalline methamphetamine during the second half of the year, after the easing of mobility restrictions. For example, 11 million "captagon" tablets were seized in the port of Damietta in November, accounting for the largest quantity of amphetamine seized in the country in 2020.[227]

Elsewhere in the region, in Israel and Jordan, drug traffickers adapted by increasing their use of new land routes and uncontrolled land border-crossing points to compensate for the halting of commercial flights in early 2020.[228] In May 2020, Saudi Arabia reported a decrease in the trafficking of "captagon" and khat and an increase in the quantities of cannabis trafficked.[229] In early 2021, large scale seizures of "captagon" in Saudi Arabia, for example of 11 million tablets hidden among wood pellets in January 2021 and of 5.4 million tablets hidden in a pomegranate shipment in April 2021, indicated that trafficking has resumed after the initial stages of the pandemic.[230]

Trafficking in cannabis resin in the Middle East and North Africa may not have been disrupted by the closure of borders during the COVID-19 pandemic. Most of the cannabis resin smuggled to Europe goes through the north of Morocco to Spain,[231] but it can also pass through ports in Algeria, Tunisia and Libya before being transported to South-Eastern Europe. During the pandemic, criminal networks may have opened new routes by using convoys of trucks through the south of Morocco.[232]

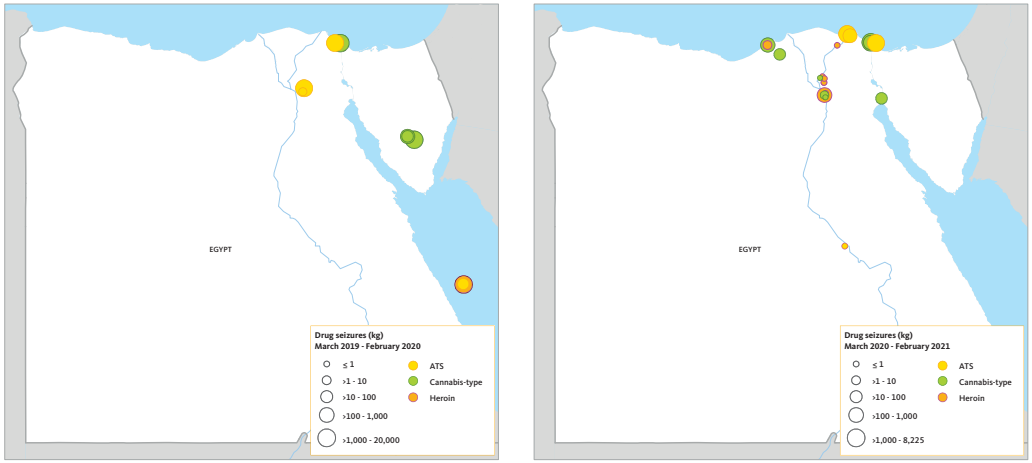
Measures to contain the spread of COVID-19 do not seem to have had a great impact on trafficking in heroin in the Middle East and North Africa.[233] It is still too early to draw any definitive conclusions, especially in view of the shortfalls in official data, but several small seizures and one large seizure of heroin were made in Egypt in 2020, suggesting that trafficking continued. Price data from Algeria, however, show an increase in prices per gram of heroin, pointing to local shortages of heroin in retail markets.[234]

With regard to amphetamine-type stimulants, seizures reported during the COVID-19 pandemic show that trafficking through maritime shipments continued. Major seizures of "captagon" continued to be reported in 2020, for example, in Egypt.

The most visible impact of the pandemic in the Middle East and North Africa has been on trafficking in "ecstasy", which is mainly trafficked from Europe to local markets in North Africa by individuals using commercial flights or boats.[235] Price data reported by Algeria[236] point to a sharp increase in "ecstasy" prices in 2020, indicating a possible supply disruption. However, seizures made in Algeria and

222 UNODC field office assessment based on the collection of qualitative and quantitative information.
223 UNODC, Drugs Monitoring Platform.
224 UNODC field office assessment based on the collection of qualitative and quantitative information.
225 The exact nature of "Voodoo" and "Strox" is unknown, as no forensic data appear to be available to date. The substances appear to contain synthetic cannabinoids, as well as other substances, such as atropine, hyoscine or hyoscyamine.
226 Information provided to the UNODC Regional Office for the Middle East and North Africa.
227 UNODC, Drugs Monitoring Platform.
228 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms".
229 Response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.
230 UNODC, Drugs Monitoring Platform.
231 UNODC, *World Drug Report 2020* (United Nations publication, 2020).
232 UNODC, Drugs Monitoring Platform.
233 UNODC field office assessment based on the collection of qualitative and quantitative information.
234 Information made available to the UNODC field office.
235 Ibid.
236 UNODC field office assessment based on the collection of qualitative and quantitative information.

MAP 10 **Drug seizures in Egypt, March 2019–February 2020 and March 2020–February 2021**




Source: UNODC, Drugs Monitoring Platform.

*Note: The figure is based on information from significant individual seizures, which constitutes an opportunistically determined subset of all relevant seizures. Grey areas in the maps denote countries excluded from the specific analysis or an absence of data points.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*

Tunisia in July 2020 suggest that trafficking in "ecstasy" resumed in mid-2020.[237]

## Oceania

In Oceania, New Zealand saw a significant decrease in the number of seizure cases and in the quantity of methamphetamine, in powder or crystalline form, seized in 2020, pointing to a supply disruption. Only 260 kg of the substance was seized from January to November 2020, compared with 1,826 kg seized during the same period in 2019, a decrease of more than 80 per cent. In the early stage of the pandemic, police seizures of methamphetamine in New Zealand increased compared with the levels observed prior to the COVID-19 pandemic, with quantities seized increasing by 26 per cent in May 2020 compared with May 2019.[238] But the overall sharp decline in seizures after May was probably the result of COVID-19-related restrictions on travel, as one of the main routes for trafficking drugs into the country is by air imports and air passenger streams, which rely on licit trade channels.

In Australia, wastewater analyses pointed to a marked reduction by August 2020 in the consumption of methamphetamine and fentanyl, while the consumption of other drugs, such as cocaine, cannabis and MDMA, increased or remained stable.[239] This may indicate a reduction in methamphetamine trafficking, although the consumption of drugs also depends on many factors in addition to availability.

237 Ibid.

238 New Zealand, National Drug Intelligence Bureau, "Illicit drug assessment".

239 Australian Criminal Intelligence Commission, University of Queensland and University of South Australia, *National Wastewater Drug Monitoring Program*, Report No. 12 (2021).

# IMPACT ON DRUG DEMAND



## Measures implemented to contain the spread of COVID-19 have had a negative impact on drug use and aggravated health risks for people who use drugs

According to the evidence available to date, the lockdown measures implemented to contain the spread of COVID-19 and the subsequent unemployment, stress, physical distancing and related isolation and boredom, as well as changes in the availability of certain substances, have contributed to some measurable changes in drug use behaviour across the world, particularly during the first phase of the pandemic. The evidence remains too patchy to detect concrete changes in the global prevalence of drug use or the amounts of drugs consumed during the course of the pandemic, but surveys on drug use, mostly in Europe and North America,[240, 241, 242, 243, 244, 245, 246] and qualitative studies in other regions, have provided insights into changes in drug use and drug use patterns.[247, 248, 249]

The use of certain drugs has been more prone to change than that of others, and the different subpopulations of people who use drugs have been affected differently. This has depended on, among other things, the length and severity of lockdown measures, their impact on drug availability and the preferred manner of consuming certain drugs.

A few common trends seem to have emerged across different countries: an increase in the consumption of cannabis (although it is not clear whether it reflects the prevalence or the frequency of drug use, or both); the non-medical use of pharmaceutical drugs, such as tramadol, benzodiazepines or barbiturates; and a reduction in the use of drugs that are mainly consumed in social or recreational settings and contexts, such as cocaine or "party drugs" such as MDMA, mostly due to the widespread implementation of lockdown measures and closures in the night-time industry. For other people who use drugs, there does not seem to have been a substantial change in the patterns of use,[250] although it is too early to draw definitive conclusions.

The shortages in the supply of some drugs observed in some countries during the initial lockdown periods, indicated by price increases and reduced availability,[251] even if short-lived, led to some shifts and adaptions in drug use patterns. Some people simply reduced their consumption, while others resorted to substitutes that, especially

240 Global Drug Survey, "GDS COVID-19 special edition: key findings report", August 2020.

241 The EMCDDA European Web Survey on Drugs: COVID-19 (EWSD-COVID), summary findings presented in EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe", EMCDDA trendspotter briefing (June 2020).

242 Madison K. Firkey, Alan Z. Sheinfil and Sarah E. Woolf-King, "Substance use, sexual behavior, and general well-being of U.S. college students during the COVID-19 pandemic: a brief report", *Journal of American College Health* (2021).

243 Heide Busse and others, "Engagement in health risk behaviours before and during the COVID-19 pandemic in German university students: results of a cross-sectional study, *International Journal of Environmental Research and Public Health*, vol. 18 (2021).

244 Gabrielle K. Welle-Strand and others, COVID-19 survey among people who use drugs in three cities in Norway, *Drug and Alcohol Dependence*, vol. 217, art. No. 108302 (December 2020).

245 Tara M. Dumas, Wendy Ellis and Dana M. Litt, "What does adolescent substance use look like during the COVID-19 pandemic? Examining changes in frequency, social contexts, and pandemic-related predictors", *Journal of Adolescent Health*, vol. 67, No. 3 (September 2020), pp. 354–361.

246 Nathalie Vanderbruggen and others, "Self-reported alcohol, tobacco, and cannabis use during COVID-19 lockdown measures: results from a web-based survey", *European Addiction Research*, vol. 26, No. 6 (November 2020), pp. 309–315.

247 The related academic literature includes, Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

248 UNODC conducted qualitative assessments in several regions and collected responses from Member States in an open call for contributions.

249 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia" (Tashkent, 2020).

250 Global Drug Survey, "GDS COVID-19 special edition".

251 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use", Research brief (Vienna, 2020).

## Drug use and consumption

Changes and trends in drug use can be described by means of different metrics.[a] The extent of drug use in a population is usually measured in terms of the number of people who used a certain drug in a certain period of time (e.g., the lifetime, annual or monthly prevalence of drug use), while drug consumption is measured in terms of the overall amount of drugs consumed in a certain time period.

The possible changes associated with the COVID-19 pandemic can be considered from different perspectives: in terms of the prevalence of use or the number of people who use drugs (drug use), the amount of drugs consumed (drug consumption) or the frequency of drug use. Possible effects related to the pandemic could lead to more or fewer people using drugs and/or induce people who already use drugs to change their drug consumption patterns by increasing or reducing the amounts of drugs they consume or the number of times they consume them.

Most of the evidence available on the impact of the COVID-19 crisis on drug use is based on rapid assessments or web surveys among people who use drugs or the general population. Typically, these instruments have not allowed for in-depth assessment of patterns of frequency, consumption or prevalence of use. They have broadly assessed changes in general drug use without focusing on specific information on patterns or extrapolating the findings to the general population. Frequently, participants in these studies were recruited opportunistically, for example, through the Internet, therefore reducing the representativeness of the surveys, as certain groups of people who use drugs may have been less likely to be included.

In the present booklet, the term "drug use" is used with a broad meaning, often reflecting the language used by the authors of the studies cited, and it is acknowledged that the term may encompass different dynamics related to drug use, consumption and frequency.

a See the online methodological annex to the present report.

in the case of heroin, are more harmful or conducive to even more harmful patterns of use, including the use of heroin laced with fentanyl or other substances, or the initiation of injecting drug use.

In certain circumstances, the health risks for people who use drugs have been aggravated during the pandemic. In North America, for example, the already high prevalence of drug-related overdose deaths has increased further[252, 253] and reports from some African countries have pointed to an increase in non-fatal overdoses during lockdown periods,[254] a result of people who were relying on treatment switching to other substances when treatment became less available. At the same time, there is evidence that some people who use drugs have adjusted their behaviour to reduce the risk of contracting COVID-19, for example, by reducing the sharing of drug paraphernalia[255] or by modifying their drug purchasing behaviour in ways that have reduced social contacts.[256]

252 Canada, Public Health Agency of Canada, Special Advisory Committee on the Epidemic of Opioid Overdoses, "Opioid- and stimulant-related harms in Canada", March 2021.

253 United States Department of Health and Human Services, Centers for Disease Control and Prevention, Media release.

254 UNODC field office assessment based on the collection of qualitative and quantitative information in West and Central Africa.

## The COVID-19 pandemic has led to some changes in drug use patterns

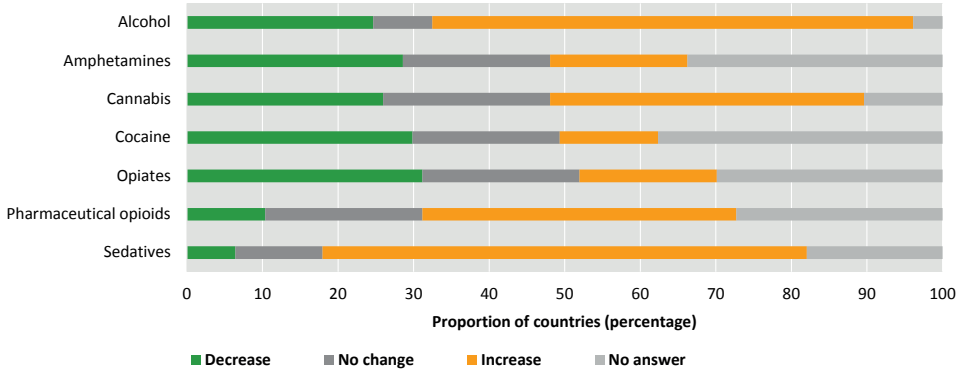
A global survey of addiction medicine professionals from 77 countries[257] in all regions, carried out in April and May 2020, revealed that there had been some perceived changes in overall drug use during the early stages of the COVID-19 pandemic, but that the changes had not been

255 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia".

256 Global Drug Survey, "GDS COVID-19 special edition".

257 Each of the 77 countries was represented by 1 to 13 addiction medicine professionals who participated in the survey. See Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol".

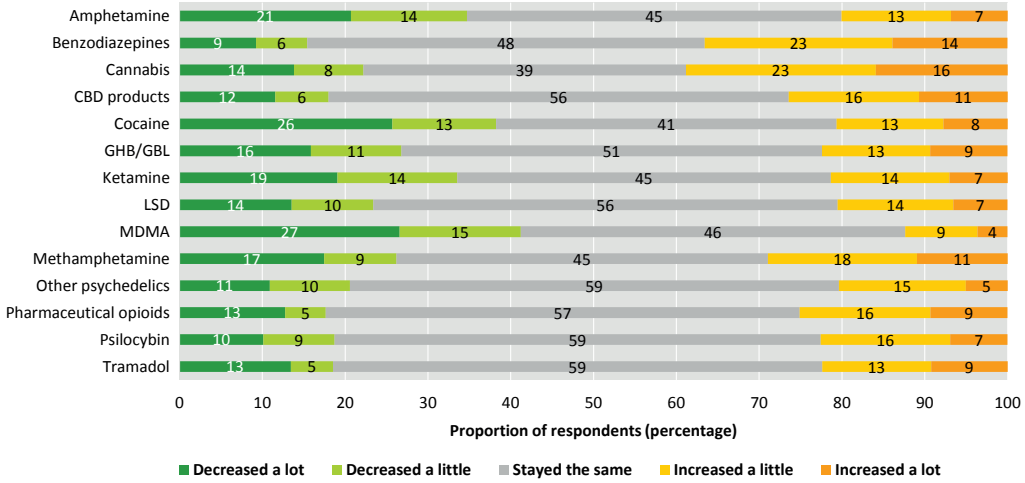
**FIG. 24** Trends in drug use during the early stages of the COVID-19 pandemic, as reported by national addiction medicine professionals, by substance, April–May 2020




Source: Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

*Note: Data are based on the responses of experts from 77 countries in all regions. Respondents were asked to report changes in the use of alcohol, amphetamines, cannabis, cocaine, opiates, pharmaceutical opioids and sedative-hypnotics in the countries, with the following options for responses: "increased"; "decreased"; "no change"; "I do not know"; and "the number of users is very low/none". Country data trends were calculated by taking the averages of the responses of all respondents in each country. The category "No answer" reflects responses in which respondents indicated a lack of information or a reluctance to respond to the question.*

**FIG. 25** Global trends in the frequency of drug use among people who reported having used drugs recently, compared with the period prior to the onset of the COVID-19 pandemic, May–June 2020




Source: Global Drug Survey, "GDS COVID-19 special edition: key findings report", August 2020.

*Note: Data are based on a survey of 55,000 respondents who had used alcohol or drugs recently and had access to the Internet. Drug types were not shown if the global sample size was less than 500.*

homogeneous across countries or substances. For example, increases in the use of alcohol and the non-medical use of sedatives (benzodiazepines and barbiturates) and pharmaceutical opioids were reported by experts in the majority of the countries surveyed. An increase in cannabis use was also quite pronounced, but the trends in other substances reported by addiction medicine professionals were more heterogeneous.

A global online survey conducted in May and June 2020 among a self-selected sample of 55,000 people from more than 50 countries (mostly developed countries in Western and Central Europe, the Americas and Oceania) who had recently used alcohol and/or drugs mirrored some of these trends. The survey revealed an increase in the frequency of use of cannabis and benzodiazepines and a decrease in the frequency of use of MDMA and cocaine; the pattern for other drugs was less clear. It should be noted, however, that the frequency of use among many of the respondents, between 39 and 59 per cent of them, depending on the substance, did not change, compared with the period prior to the onset of the COVID-19 pandemic.[258]

**Despite different patterns of change in drug across regions and subregions, an increase in the use of cannabis and the non-medical use of some pharmaceutical drugs has been observed in all regions**

Emerging evidence suggests that drug use patterns have shifted as a result of short-term changes in drug markets brought about by the COVID-19 pandemic:[259] as the availability of certain drugs has increased or decreased, people who use drugs switched between substances. For example, in some regions, there have been reports of increased use of fentanyl and other alternatives to heroin among people who are opioid dependent;[260, 261, 262] the increased use of fentanyl may be attributable either to increased demand for fentanyl-laced heroin, increased consumption of fentanyl in reaction to a reduced supply of heroin, or sellers increasingly adding fentanyl to heroin in response to reduced purities.

## Africa

Qualitative assessments undertaken in Africa suggest that the situation in the region mirrors global trends, with increases in the use of cannabis and of illicitly manufactured home-made substances to compensate for reductions in the availability of other drugs.[263] Experts interviewed in Senegal assessed that overall treatment demand for heroin use has decreased, while overall treatment demand for cannabis, alcohol, benzodiazepine and cocaine/"crack" use has increased.[264, 265]

A similar pattern was observed in Benin and Nigeria, where the closure of borders and the restriction of maritime and air traffic reportedly led to decreases in the availability of cocaine and heroin, which may have led to a decrease in the use of those drugs. People who use drugs reportedly used cannabis, alcohol and tobacco as substitutes, as those substances were more accessible and more affordable. Reports from the Gambia indicated the increased consumption of diazepam tablets in reaction to reductions in the availability of other drugs.[266]

## Americas

In the Americas, a study in the United States among a population diagnosed with, or at risk of, substance use disorders found, on the basis of urine samples, that the frequency of use of cocaine, fentanyl, heroin and methamphetamine had increased in the four months following the outbreak of COVID-19, compared with the four months preceding it.[267] Racial and ethnic disparities with regard to drug use also seem to have been widened in the United States during the pandemic, according to another study, carried out in April and May 2020. The study found that more Hispanic people (37 per cent) than

258 Global Drug Survey, "GDS COVID-19 special edition".

259 Jason Grebely, Magdalena Cerdá and Tim Rhodes, "COVID-19 and the health of people who use drugs: what is and what could be?", *International Journal of Drug Policy*, vol. 83 (2020).

260 EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

261 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*, Joint Publications Series (Luxembourg, Publications Office of the European Union, 2020).

262 Canadian Centre on Substance Use and Addiction, and Canadian Community Epidemiology Network on Drug Use, *CCENDU Alert: Changes Related to COVID-19 in the Illegal Drug Supply and Access to Services, and Resulting Health Harms* (Toronto, Canada, 2020).

263 Qualitative assessment provided to UNODC by the African Union.

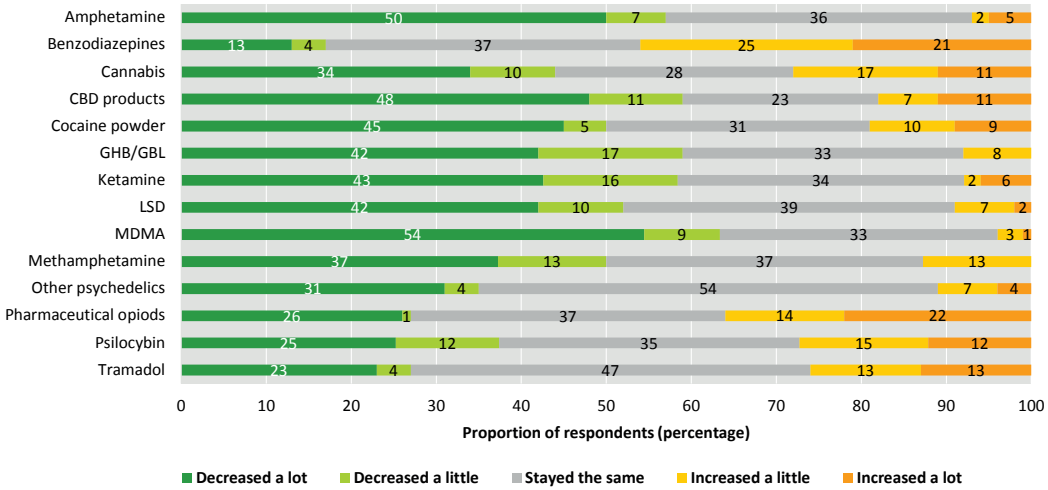
264 Information provided to UNODC by the Government of Senegal.

265 UNODC field office assessment based on the collection of qualitative and quantitative information in West and Central Africa.

266 Ibid.

267 The study was based on 150,000 urine samples from across the United States (Jacob J. Wainwright and others, "Analysis of drug test results before and after the US declaration of a national emergency concerning the COVID-19 outbreak", *JAMA*, vol. 324, No. 16 (October 2020), pp. 1674–1677.

FIG. 26 **Trends in the frequency of drug use among people who reported having used drugs recently, compared with the period prior to the onset of the COVID-19 pandemic, Brazil, May–June 2020**




Source: Global Drug Survey, "GDS COVID-19 special edition", country report Brazil.

*Note: Drug types were not shown if the global sample size was less than 500.*

other population groups (14–19 per cent) had initiated or increased drug or alcohol use as a response to the COVID-19 crisis.[268]

An online retrospective study among opportunistically sampled electronic dance music partygoers in New York[269] found that, in April and May 2020, the frequency of cocaine use had decreased among 79 per cent of the study participants, MDMA use had decreased among 71 per cent and LSD use among 68 per cent. However, some participants reported an increase in the frequency of their use of cocaine (7 per cent), "ecstasy" (8 per cent), or LSD (12 per cent), and 35 per cent reported an increased frequency of cannabis use. Most of the study participants reporting cocaine use (67 per cent) had reduced the amount they used.

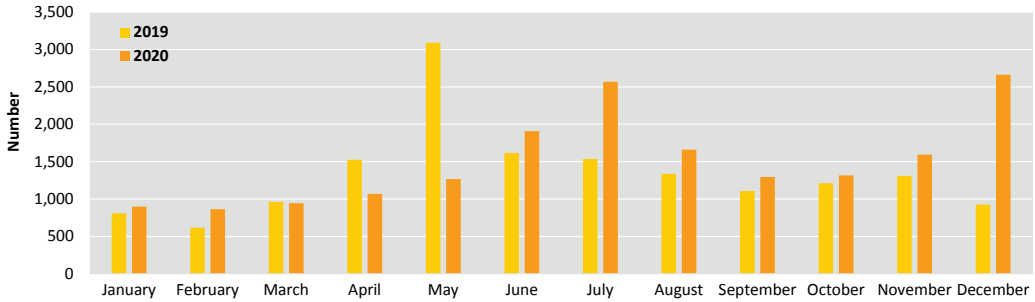
In Canada, in a countrywide survey conducted in March and April 2020 that used a stratified, multi-stage design involving probability sampling, the vast majority of the survey participants had not changed their weekly consumption of cannabis, alcohol and tobacco, while a small minority had increased their consumption of those substances. Participants who rated their mental health as "fair" or "poor" were more likely to report an increase in their consumption of the substances.[270] In January 2021,

268 Based on 30-day prevalence estimates of substance use increase or initiation, defined as affirmative response to the question: "Have you started or increased using substances to help you cope with stress or emotions during the COVID-19 pandemic? Substance use includes alcohol, legal or illegal drugs, or prescriptions drugs that are taken in a way not recommended by your doctor." (Lela R. McKnight-Eily and others, "Racial and ethnic disparities in the prevalence of stress and worry, mental health conditions, and increased substance use among adults during the COVID-19 pandemic: United States, April and May 2020", *Morbidity and Mortality Weekly Report*, vol. 70, No. 5 (February 2021), pp. 162–166.

269 Joseph J. Palamar, Austin Le and Patricia Acosta, "Shifts in drug use behavior among electronic dance music partygoers in New York during COVID-19 social distancing, *Substance Use and Misuse*, vol. 56, No. 2, (2021).

270 Participants were probabilistically selected from a sampling frame of respondents aged 15 and older from all 10 provinces in Canada. Changes in substance use were based on the question: "Have your weekly habits changed in any of the following activities?: consuming cannabis; consuming alcohol; and using tobacco products". The response categories included "increased", "decreased" and "no change". (Michelle Roterman, "Canadians who report lower self-perceived mental health during the COVID-19 pandemic more likely to report increased use of cannabis, alcohol and tobacco", Statistics Canada, 7 May 2020).

FIG. 27 Persons arrested for drug-related offences, Republic of Korea, 2019 and 2020




Source: Supreme Prosecutors' Office of the Republic of Korea. Data made available to the UNODC Regional Office for South-East Asia and the Pacific.

34 per cent of Canadians who reported having previously consumed cannabis said that their consumption had increased since the pre-pandemic period, while 12 per cent reported that it had decreased.[271] However, this trend was ongoing before the onset of the pandemic, which may have simply accelerated it.

Findings relating to the Brazilian respondents in the online global survey conducted in May and June 2020 of people who had recently used alcohol or drugs suggested a decrease in use across all substances, compared with the period prior to the onset of COVID-19,[272] the main exceptions being the non-medical use of benzodiazepines and pharmaceutical opioids.

A general reduction in the use of most substances other than cannabis in Mexico during 2020 was also reported by experts.[273] Evidence from a cross-sectional, non-probabilistic analytical study conducted in a few states in Mexico using a non-representative survey sample of cannabis users suggests that cannabis was largely used as a coping mechanism against social isolation, and that its use increased particularly among those living alone or with friends.[274]

In Colombia, in a Government-led, online study among 18,779 people, conducted between June and December 2020, 8.2 per cent of the study participants reported having used tobacco or cigarettes in the three months prior to the survey; 51 per cent had consumed alcohol and 1.2 per cent had used illicit drugs: mainly sedatives, cannabis and cocaine. The analysis showed that higher levels of resilience[275] correlated with lesser substance use, particularly of tobacco, alcohol, cannabis and sedatives. Likewise, a direct link was found between the risks of anxiety and depression and the use of any substance.[276]

## Asia

Data from East and South-East Asia have indicated that drug use levels and patterns have not substantially changed during the pandemic. Methamphetamine has remained the primary drug of concern in all countries in the subregion.[277] According to data and trend information from China, the Republic of Korea and Thailand, it was only during the initial stage of the pandemic that the related mobility restrictions and lockdowns resulted in a decrease in the number of users and offenders due to drug shortages. Once pandemic control measures were

271 Statistics Canada, "Alcohol and cannabis use during the pandemic: Canadian Perspectives Survey Series 6", 4 March 2021.

272 Global Drug Survey, "GDS COVID-19 special edition", country report Brazil.

273 Responses to the UNODC-WHO Informal Scientific Network survey 2021.

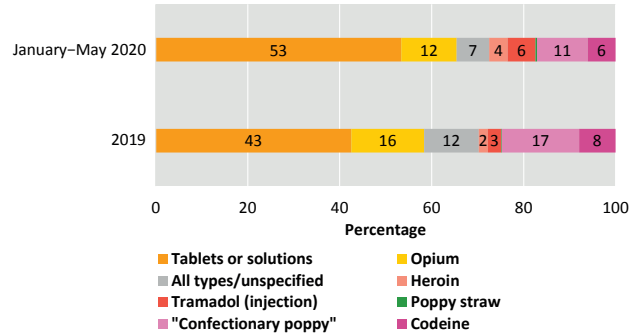
274 Paulina Beverido Sustaeta and others, "Patrones de consumo de mariguana, abastecimiento y estado de ánimo durante el confinamiento por COVID-19", *Revista Internacional de Investigación en Adicciones*, vol. 6, No. 2 (2020), pp. 25–34.

275 As per the Connor-Davidson Resilience Scale (CD-RISC 10).

276 Colombia, Ministry of Health and Social Protection, "Relationship between mental health risks and the level of resilience in the Colombian adult population, during the COVID-19 pandemic", Research brief (forthcoming).

277 UNODC field office assessment based on the collection of qualitative and quantitative information in South-East Asia and the Pacific.

**FIG. 28 Share of the main drugs used by clients of "trust points", Uzbekistan, 2019 and January–May 2020**




Source: UNODC Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia" (Tashkent, 2020).

*Note: Data were obtained from "trust points" (low-threshold services) in Uzbekistan, excluding those in Tashkent city and the Tashkent region.*

relaxed, the use of methamphetamines quickly returned to levels similar to or higher than those in 2019.

In the Republic of Korea, monthly drug-related arrests, mostly related to the use or possession of drugs for personal use, decreased in April and May 2020, compared with the corresponding months in 2019, but increased again from June 2020.[278] Overall, about 13 per cent more people were arrested for drug-related offences in 2020 than in 2019. Data from Thailand indicate that both consumption and possession of drugs by drug offenders decreased sharply in February 2020, when lockdown measures were first introduced, but subsequently returned to their pre-pandemic levels.[279] From the information available, it is not possible to assess whether the decrease in arrests was due to a reduction in the policing of people who use drugs or a decrease in the number of users.

According to reports from China relating to the initial lockdown periods, the isolation measures implemented to prevent the spread of the virus inhibited domestic drug trafficking and caused the retail market to shrink significantly, specifically in the case of drugs that are most commonly used in nightlife settings.[280]

After the closure of all its borders in March 2020, Brunei Darussalam reported sharp increases in the prices of cannabis and methamphetamine per gram,[281] pointing to a reduced supply of those drugs.

In Central Asia, the ongoing increase in the demand for synthetic drugs accelerated during the early stages of the COVID-19 pandemic as a result of the reduced availability caused by impediments to the trafficking of cannabis and opiates.[282] In Kazakhstan, the ongoing decrease in the availability of opiates and cannabis may have accelerated an increase in the demand for synthetic drugs such as amphetamines and synthetic cannabinoids. Moreover, people dependent on opiates have become more likely to use "home-made" opiates such as poppy seed extracts, a pattern of use that had already been observed prior to the pandemic. In Kyrgyzstan and Tajikistan, experts noted an overall decrease in drug use during the early stages of the pandemic. Some users shifted their use from one drug to another, for example, increasing their use of synthetic cannabinoids, pharmaceuticals or alcohol. Meanwhile, according to expert interviews, heroin users reportedly joined methadone maintenance therapy programmes at an increasing rate. In Uzbekistan, PWID were reported to have injected solutions containing a mixture of a variety of tablets, and injecting use of heroin and desomorphine were also reported.[283]

## Europe

In Europe, the picture that emerges from the multitude of studies conducted is not conclusive but[284] points to some reductions in drug consumption, or in some forms of drug use, during the first three months of the pandemic, in 2020. The reductions were more pronounced in certain subpopulations and for particular substances, such as MDMA or cocaine, with national variations also observed.

278 Supreme Prosecutors' Office of the Republic of Korea.

279 Thailand, Office of the Narcotics Control Board, "Latest situation on synthetic drugs and responses to the threats in Thailand", presented at the 2020 Global SMART Programme regional workshop, November 2020.

280 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

281 Response submitted by Brunei Darussalam in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

282 UNODC Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia".

283 Ibid.

284 EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

The implementation of lockdown measures and the subsequent reduction in opportunities to use drugs in social settings, as well as temporary disruptions to the availability of certain substances, are possible reasons for the decrease.

After an initial decrease in the use of MDMA and cocaine during the initial lockdown in European Union countries, when about 20 per cent of users of MDMA or cocaine reported having ceased using one of those two drugs in that period, there were signs of recovery during the summer months of 2020, for example, as shown by wastewater analyses conducted. A worrying development identified by experts in Belgium, France, Ireland, Portugal and Spain in early 2021 was that the use and/or availability of "crack" cocaine appeared to have increased in 2020, and there were also some reports of heroin, "crack" cocaine and benzodiazepines being sold in smaller and cheaper units than previously, which may be an indication of sellers adapting to the reduced financial means of people who use drugs during the pandemic.[285]

Responses to a survey conducted by EMCDDA suggest that there was a perception among people who use drugs that the use of benzodiazepines had increased, especially during the second half of 2020. According to national experts, increases were observed among marginalized groups and people with established and long-term substance use disorders.[286]

Data from a web survey on drugs in European Union countries indicated that, among respondents, cannabis use patterns had remained relatively stable during the first lockdown period, with nearly half (42 per cent) of the participating cannabis users reporting no change in their cannabis use, compared with the pre-lockdown period. Expert opinions indicated that cannabis use appeared to be stable in the second half of 2020, although with some signs of possible increases in the amounts used by more frequent users. Data from wastewater analyses also did not show any notable changes in cannabis use when comparing data for 2019 and 2020. However, a number of concerns were raised by key informants about reports of cannabis being adulterated with synthetic cannabinoids, for example, in Austria, France, Germany and the Netherlands.[287]

There was some variation at the country level during the initial lockdown period. A web-based survey of 3,632 non-randomly selected people in Belgium, for example, found a slight increase in the use of alcohol and cigarettes but not of cannabis.[288] Similarly, a web survey of 5,021 students in Germany found unchanged use of tobacco and cannabis, and an overall decrease in binge drinking, with 24 per cent reporting a decrease and 5 per cent reporting an increase.[289]

On the other hand, among an opportunistic sample of 1,563 people who used cannabis in the Netherlands during the initial lockdown period, 49 per cent reported no change in use patterns, while 41 per cent reported increased use and one third reported having initiated daily use.[290] In France, almost one third of the people who used cannabis reported an increase in such use during the initial lockdown period.[291]

Localized shortages of heroin were also reported in some European Union countries in the early stages of the pandemic and may have contributed to a decrease in the use of the drug in some countries.[292, 293] This resulted in an increase in demand for opioid maintenance therapy and an increase in the use of replacement substances among opioid users in countries such as Czechia, France, Germany, Ireland and Italy.[294] These patterns may be linked to shortages in the availability of heroin, as well as fewer possibilities to purchase heroin because of income loss.[295] Indeed, a reduction in heroin use among high-risk opioid users was reported in Czechia, Germany, Ireland, the Netherlands, Portugal and Slovakia.[296] Conversely,

285 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons: Results from an EMCDDA Trendspotter Study* (Luxembourg, Publications Office of the European Union, 2021).

286 Ibid.

287 Ibid.

288 Vanderbruggen and others, "Self-reported alcohol, tobacco, and cannabis use during COVID-19 lockdown measures".

289 Busse and others, "Engagement in health risk behaviours before and during the COVID-19 pandemic in German university students".

290 Margriet W. van Laar and others, "Cannabis and COVID-19: reasons for concern", *Frontiers in Psychiatry*, vol. 11, art. No. 601653 (December 2020).

291 Benjamin Rolland and others, "Global changes and factors of increase in caloric/salty food intake, screen use, and substance use during the early COVID-19 containment phase in the general population in France: survey study", *JMIR Public Health and Surveillance*, vol. 6, No. 3 (April 2020).

292 EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

293 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".

294 EMCDDA "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

295 Grebely, Cerdá and Rhodes, "Covid-19 and the health of people who use drugs" and EMCDDA, "Impact of Covid-19 on patterns of drug use and drug-related harms in Europe".

296 EMCDDA "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

## Wastewater analysis confirms decreases in the consumption of certain drugs in Europe in 2020

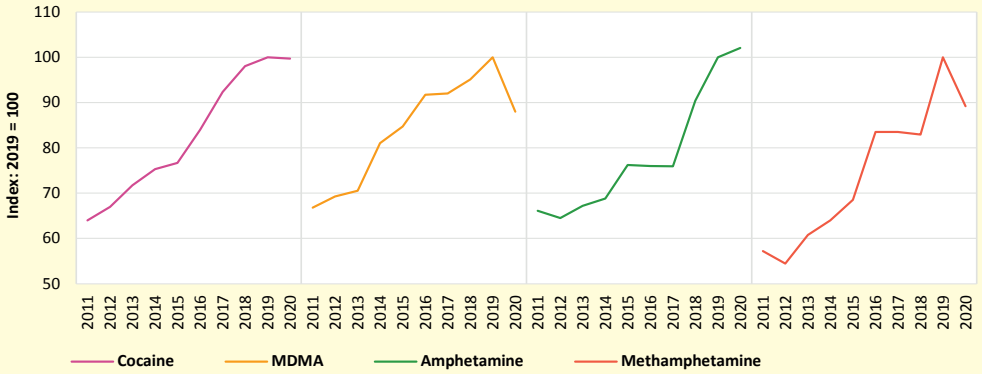
The analysis of communal wastewater for the presence of drugs and their metabolites provides insights into the quantities of drugs consumed in a community. Over the period 2011–2020, analysis of wastewater to determine the extent of drug consumption took place in 147 cities across 31 countries in Western and Central and South-Eastern Europe; in 2020, 88 cities in 22 European countries were covered.[a, b]

### Wastewater analysis shows a marked decrease in MDMA, cocaine and methamphetamine consumption in 2020

The available data suggest a general decrease in, or stabilization of, drug consumption in Europe in 2020, after the overall increase observed between 2011 and 2019.[a] A long-term trend analysis at the population level shows a clear end in 2020 to the long-term increasing trend in the consumption of various drugs. Consumption of cocaine and amphetamine remained at the same or slightly increased levels when compared to 2019, whereas MDMA and methamphetamine consumption showed a pronounced decrease in 2020 compared with previous years.

The direct comparison of cities with wastewater data available for both 2019 and 2020 yields a more precise picture of the impact of COVID-19 than the broad trend at the population level. It confirms reports by experts and anecdotal information of a pronounced decrease in cocaine, methamphetamine and MDMA consumption. There was, however, a certain degree of heterogeneity across cities, with a decrease observed in the quantity of MDMA-related metabolites in wastewater in 34 European cities in 2020, while an increase was observed in 21 cities. Similarly, 38 European cities reported a decrease in 2020 in the consumption of methamphetamine, while 18 cities reported an increase. The heterogeneity in the quantities of amphetamine found in wastewater in 2020 was less striking, with almost the same number of cities reporting a decrease (28) and an increase (24). The situation was even more balanced in the case of cocaine, with the same number of cities (28) reporting a decrease and an increase in 2020; this represents a different pattern from 2019, when 37 cities reported an increase in cocaine consumption and only 15 cities a decrease.

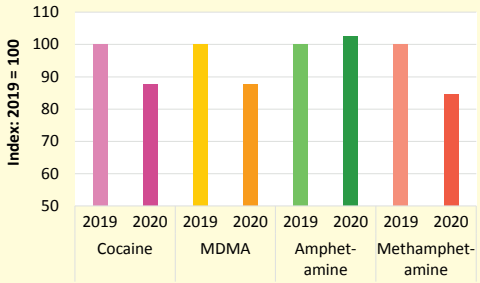
**Trends in drug consumption in 147 European cities, 2011–2020**




Source: UNODC calculations based on wastewater data from the Sewage Analysis CORe group Europe.

*Note: Average quantity of amphetamine/methamphetamine found in wastewater in 147 cities in 30 countries weighted by the population of the sites: missing data were imputed with an assumption of a gradual increase/decrease in years in which no analysis took place in a city, or latest available data were used. For amphetamine, statistical outliers that are in all likelihood related to the dumping of waste from local amphetamine manufacture have been excluded from the data analysis.*

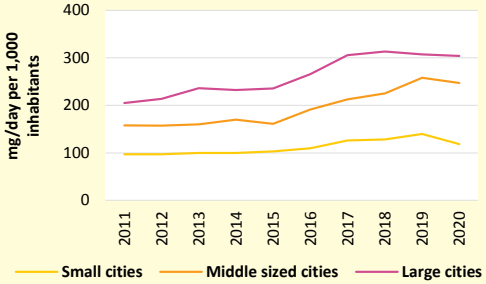
**Trends in drug consumption in 56 European cities reporting data in both 2019 and 2020**




Source: UNODC calculations based on wastewater data from the Sewage Analysis CORe group Europe.

*Note: Calculations based on unweighted averages of city data for two subsequent years, 2019 and 2020. For amphetamine, statistical outliers that are in all likelihood related to the dumping of waste from local amphetamine manufacture have been excluded from the data analysis.*

**Benzoylecgonine (cocaine metabolite) found in wastewater in 147 European cities, 2011–2020**




Source: UNODC calculations based on wastewater data from the Sewage Analysis CORe group Europe.

*Note: Unweighted averages within size-groups of cities. Missing data were imputed with an assumption of a gradual increase/decrease in years in which no analysis took place in a city or latest available data were used.*

### Cocaine consumption decreased more sharply in smaller cities than in larger ones

When clustering cities by size of population, the data (in terms of unweighted averages) show that cocaine consumption decreased more sharply in cities of less than 100,000 inhabitants than in cities of 100,000 to 1 million inhabitants. In cities with more than 1 million inhabitants, however, cocaine consumption did not visibly change in 2020 compared with 2019. This suggests that the supply of cocaine to larger cities in Europe continued unabated in 2020, while the supply to smaller cities was affected by the COVID-19 related measures.

a UNODC calculations based on wastewater data from the Sewage Analysis CORe group Europe.

b The population covered by the sewage systems investigated amounted to 71 million people, equivalent to 12 per cent of the total population of the 31 European countries. Coverage ranged from 2 per cent of the population in Romania to 97 per cent in Liechtenstein, according to population reported by United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects 2019, rev. 1. Available at https://population.un.org/wpp.

pressure on services that remained open and were able to provide opioid maintenance therapy increased.[297]

Throughout 2020, no clear changes in the use of amphetamines were observable in the European Union, given the heterogeneity of use patterns. Nevertheless, wastewater analysis found an increase from 2019 to 2020 in amphetamine loads in more than half of the 43 participating European cities.[298]

In a number of countries in Eastern Europe and Transcaucasia (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine), cannabis use appears to have been the type of drug use least affected in the early stages of the pandemic, although different patterns have been noted between occasional and frequent users of cannabis: those who, prior to the pandemic, had used cannabis less often, in a more recreational way, may have reduced their use of the substance, while frequent users may have increased their use during the early stages of the pandemic. The availability of most imported drugs, such as heroin, MDMA, amphetamines and cocaine, by contrast, seems to have decreased, which may have led to a reduction in their use.[299]

297 Ibid.

298 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons.*

299 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

In the western Balkans, the changes observed in substance use were characterized by increased consumption of alcohol and pharmaceutical drugs, either alone, together or in combination with other drugs. In Montenegro, as well as in Kosovo, new treatment demands related to alcohol use problems were found among both current users of drugs and those who had stopped using drugs. An increase in the simultaneous use of multiple drugs among clients was reported specifically by practitioners in Bosnia and Herzegovina, Montenegro and North Macedonia, as well as Kosovo.[300]

In the Russian Federation and Belarus,[301] a non-representative survey among university students found that people who used drugs monthly had increased their use during the early stages of the pandemic. Among the respondents, 36 per cent reported having increased their use of tobacco, 30 per cent had increased their use of alcohol, 27 per cent had increased their use of cannabis, 17 per cent had increased their use of Ritalin (methylphenidate) or similar substances, 18 per cent had increased their use of pain relievers and 24 per cent had increased their use of sedatives.

### Oceania

In Oceania, a longitudinal study using a convenience sample of people who use drugs in Australia found a decrease in the use of cocaine, MDMA, methamphetamine and ketamine. Cannabis and alcohol continued to be the substances with the greatest proportion of people reporting increased use, compared with the period prior to the introduction of COVID-19 restrictions.[302] The non-medical use of pharmaceutical opioids, GHB, benzodiazepines and LSD remained unchanged. In studies among PWID conducted in Australia between June and September 2020, nearly half (48 per cent) of the PWID interviewed reported a decrease in their use of methamphetamine from March 2020, with 57 per cent of those citing decreased availability as the primary reason for the decrease in use. Smaller proportions of interviewees reported having increased their use of alcohol (27 per cent) and cannabis (25 per cent).[303]

Wastewater analysis in Australia[304] showed that, in 2020, all 13 substances monitored, including methamphetamine, cocaine, heroin and cannabis, continued to be consumed, with methamphetamine accounting for the highest levels of consumption, in terms of daily doses. However, after the start of the pandemic, consumption of methamphetamine decreased sharply in every capital city in the country. The effects of the COVID-19-related restrictions were less apparent in regional Australia, with methamphetamine use actually increasing in some areas. Decreases were also observed in the use of other drugs, such as MDMA, heroin, fentanyl and oxycodone. Cocaine consumption, on the other hand, rebounded quickly after the initial lockdown in April 2020 and reached a historical high in some parts of the country later in the year.

In New Zealand, wastewater analysis conducted during the second quarter of 2020 and thus covering the immediate national restrictions implemented in response to the COVID-19 pandemic,[305] confirmed reports of drug supply disruptions.[306] In particular, methamphetamine consumption decreased significantly throughout the second quarter of 2020, reaching its lowest weekly average consumption since national testing began in 2018, while there were also decreases in consumption of MDMA and cocaine, albeit to a lesser extent.[307]

## Lifestyle changes, stress and initial supply disruptions emerge as drivers of shifts in drug use patterns

The common drivers of shifts in drug use patterns during the initial lockdown periods that have emerged from single studies in some regions and countries relate to changes in social settings resulting from the related mobility restrictions, suggesting that social interaction can be

300 EMCDDA, "Impact of COVID-19 on drug use and drug services in Western Balkans", EMCDDA trendspotter briefing (March 2021).

301 Valentina Gritsenko and others, "COVID *19 fear, stress, anxiety, and substance use among Russian and Belarusian university students", International* Journal of Mental Health Addiction (2020).

302 Rachel Sutherland and others, "Key findings from the Australians' drug use: Adapting to the Pandemic Threats (ADAPT) study Wave 3", Bulletin No. 3 (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2021).

303 Amy Peacock and others, *Australian Drug Trends 2020: Key Findings from the National Illicit Drug Reporting System (IDRS) Interviews*, (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2021).

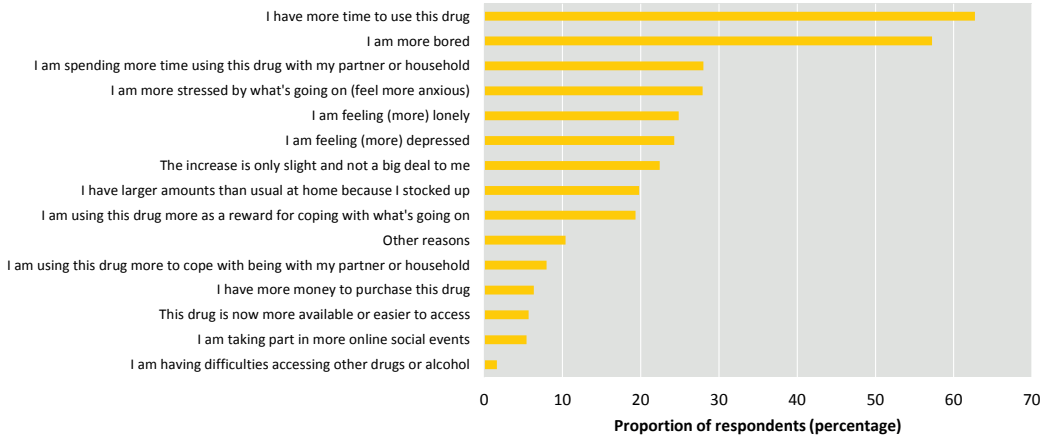
304 Australian Criminal Intelligence Commission, University of Queensland and University of South Australia, *National Wastewater Drug Monitoring Programme: Report No. 11* (October 2020).

305 New Zealand Police, "National wastewater testing programme: quarter 2, 2020", December 2020.

306 See the section on the impact of COVID-19 on the drug supply.

307 New Zealand Police, "National wastewater testing programme: quarter 2, 2020".

FIG. 29 **Reasons given by cannabis users for their increased use of cannabis after the onset of the COVID-19 pandemic, May–June 2020**




Source: Global Drug Survey, "GDS COVID-19 special edition".

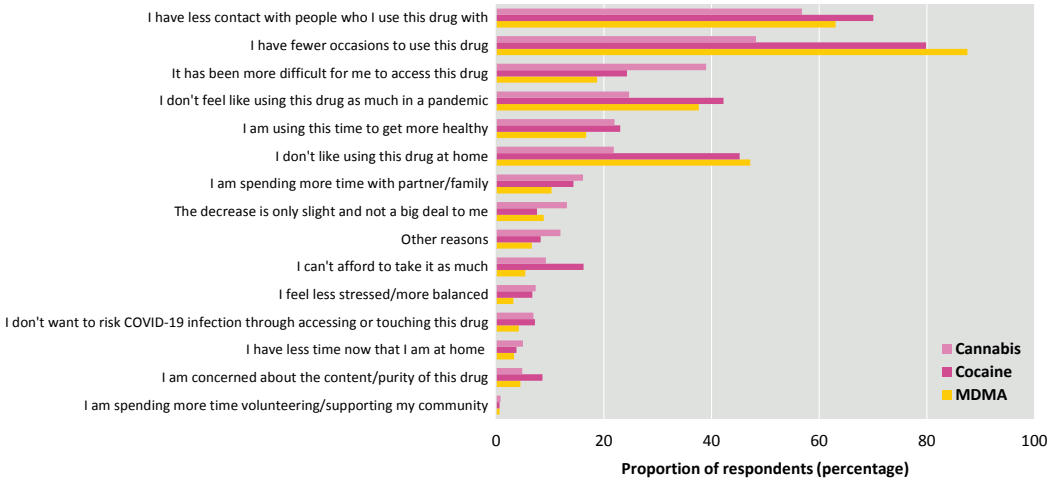
| Summary of the main drivers of increased drug use | Summary of the main drivers of decreased drug use |
|---|---|
| Increased anxiety resulting from the pandemic | Reduced contact with other people who use drugs |
| Increased stress resulting from the pandemic and related lockdown measures | Lockdown measures that restricted the ability of users to purchase drugs from drug dealers |
| Boredom | Reduced access to recreational spaces and entertainment venues |
| Increased disposable income | Income loss |
| Loneliness, depression and isolation | Reduced availability of drugs |
| More time spent with partners or friends living in the same household who are also people who use drugs | Challenging living arrangements |
| More free time | Reduced opportunities for social drug use |
| Stockpiling of drugs before the lockdown | Lower drug quality |

an important driver of trends in drug use. Moreover, changes in disposable income – either increases due to less expenditure on things such as social activities, or decreases due to, for example, job loss – also affected drug use, as did the availability of drugs, changes in mental health and in the time available for drug use (resulting from, for example, more time being spent at home, less time being spent in social settings, unemployment, or telecommuting arrangements).

The main drivers of increased drug use to have emerged include having more free time and more disposable income, boredom and anxiety, while the drivers of decreased drug use include having fewer occasions to use drugs socially and the reduced availability of drugs.

The reasons for changes in drug use patterns during the pandemic were highlighted in the global online survey conducted in May and June 2020 of people who had

FIG. 30 Reasons given by cannabis, cocaine and MDMA users for their decreased use of drugs after the onset of the COVID-19 pandemic, May–June 2020




Source: Global Drug Survey, "GDS COVID-19 special edition".

recently used drugs,[308] in which survey participants gave a number of reasons for decreased or increased frequency of cannabis use and MDMA and cocaine use.

A web-based survey in the European Union among people who use drugs highlighted similar drivers behind changes in drug use during the pandemic[309] and provided another reason for increased drug use: the stockpiling of drugs (in anticipation of lockdown or curfew measures). Reasons cited for decreased drug use were fewer opportunities to use drugs, reduced availability of drugs for purchase and reduced opportunities to collect drugs, followed by less disposable income to buy drugs, difficult living arrangements, possible health consequences and the desire to save money.

Similarly, a study in Canada[310] found that boredom, stress and loneliness had contributed to an increase in cannabis use during the early stages of the pandemic, as had convenience (for example, resulting from a lack of a regular schedule or spending more time at home) and ease of access to cannabis (for example, resulting from an increase in online shops, deliveries and curbside pickup possibilities).

In Uzbekistan,[311] where a survey of key informants showed that COVID-19-related measures had led to an overall decrease in, and changes in, the use of substances by people who use drugs, the reported drivers of those changes were difficulties in purchasing substances, fewer opportunities to consume drugs due to the presence of family members during quarantine periods, less disposable income, a reduction in the supply of opiates, increasing prices and the lower quality of available drugs.

## Shortages in the availability of drugs in some countries determined changes in drug use patterns during the initial stages of the pandemic

Some changes in drug use patterns were triggered by short-term shortages of certain drugs that occurred

308 Global Drug Survey, "GDS COVID-19 special edition".

309 EMCDDA, The EMCDDA European Web Survey on Drugs: COVID-19 (EWSD-COVID), summary findings presented in EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe".

310 Statistics Canada, "Alcohol and cannabis use during the pandemic".

311 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia".

across regions at the beginning of the pandemic,[312] for example, in the Islamic Republic of Iran, some European countries, including Bulgaria, France, Norway and Spain, and the United States.[313, 314] Initial disruptions to the supply of methamphetamine were also reported in Australia, Japan and New Zealand.[315, 316]

Shortages of drugs were also reported by people who use drugs and by addiction professionals. Among the people who use drugs participating in the global online survey in May and June 2020, 56 per cent reported that they had experienced a decrease in the availability of drugs in their country, 36 per cent reported that illicit drug prices had increased, 24 per cent reported that the range of drugs had decreased and 15 per cent reported that the drug purity had decreased.[317]

Another global survey among addiction professionals[318] showed that in a considerable percentage of the countries surveyed, there was a perception that the supply of opiates, amphetamines, cannabis and cocaine had decreased during the initial stages of the pandemic.

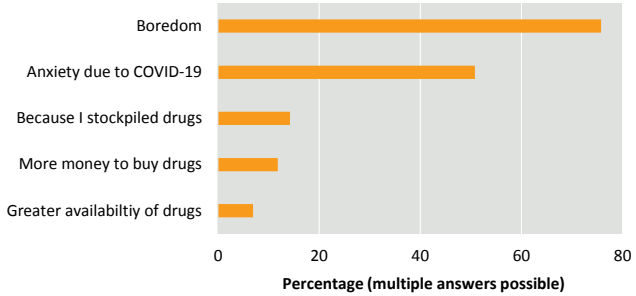
## The COVID-19 pandemic has aggravated health consequences and drug use-related harms

During the COVID-19 crisis there have been signs that the health harms caused by drug use have increased, taking different forms across countries, including marked increases in mortality in countries heavily affected by the opioid crisis, greater exposure of PWID to the risk of harm, increased mental health problems such as anxiety and depression, and increased difficulties faced by people living with HIV and drug use disorders.

The harms caused by drug use may have increased as a direct consequence of COVID-19-related measures, including measures that have led to reduced access to services or drug use equipment, an increase in risky behaviour such as injecting alone, or reduced access to support networks and safer spaces in which to use drugs (for example, supervised consumption and treatment service settings).[319] Moreover, people who use drugs may

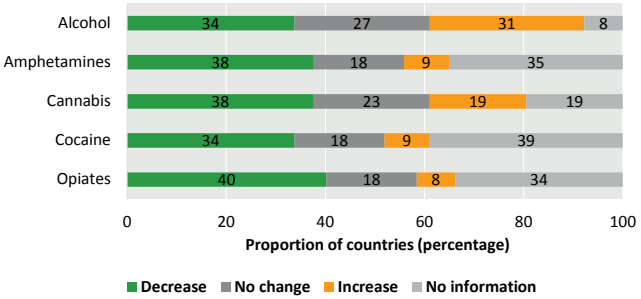
312 UNODC, "COVID-19 and the drug supply chain: from production and trafficking to use".
313 Ibid.
314 EMCDDA and Europol, *EU Drug Markets: Impact of COVID-19*.
315 New Zealand, National Drug Intelligence Bureau, "Illicit drug assessment" (November 2020).
316 UNODC field office assessment based on the collection of qualitative and quantitative information in East and South-East Asia.
317 Global Drug Survey, "GDS COVID-19 special edition".
318 Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol".

**FIG. 31** Reasons for increased drug use during the COVID-19 pandemic, reported by people who use drugs, European Union




Source: The EMCDDA European Web Survey on Drugs: COVID-19 (EWSD-COVID), summary findings presented in EMCDDA, "Impact of COVID-19 on patterns of drug use and drug-related harms in Europe", EMCDDA trendspotter briefing (June 2020).

**FIG. 32** Percentage of countries for which addiction professionals reported an increased, stable or decreased supply of drugs and alcohol, by substance, April–May 2020

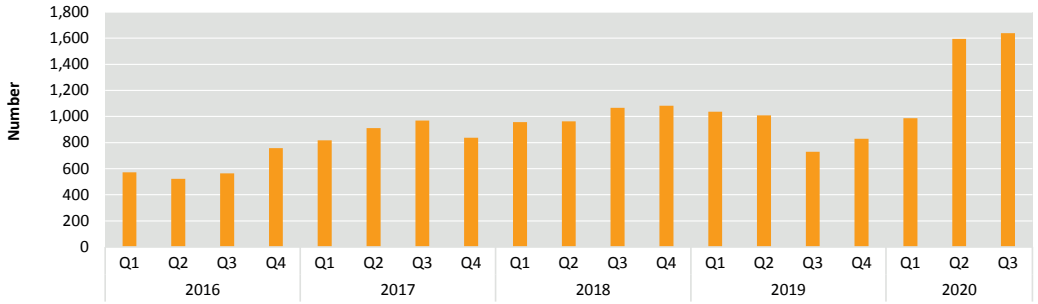



Source: Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs".

*Note: Addition professionals were asked to report changes in the supply of alcohol, amphetamines, cannabis, cocaine and opiates. The responses of more than one professional were collected for each country and country-level information was calculated by averaging the responses of all professionals interviewed in each single country. The category "No information" reflects responses in which respondents indicated a lack of information or a reluctance to respond to the question.*

319 For a more detailed discussion on how major events such as the COVID-19 pandemic can increase risks related to drug use, see Camille Zolopa and others, "A rapid review of the impacts of "Big Events" on risks, harms, and service delivery among people who

FIG. 33 Trends in opioid overdose-related deaths, Canada, 2016–2020




Source: Canada, Public Health Agency of Canada, Special Advisory Committee on the Epidemic of Opioid Overdoses, "Opioid- and stimulant-related harms in Canada", March 2021.

be at higher risk with regard to COVID-19 itself, as people who use drugs in general and people who access services for drug use may be at higher risk of experiencing respiratory complications and suffering from severe pulmonary effects after a COVID-19 infection.[320]

The patchy data available point to an aggravated health situation among people who use drugs in many countries. However, a full assessment of the consequences of COVID-19 for people who use drugs and people with drug use disorders will be possible only when more data become available.

## Increases in drug-related deaths were reported in some countries during the COVID-19 pandemic

The increase in mortality observed after the onset of the pandemic was particularly evident in the United States and Canada, where the already high level of overdose deaths was accelerated,[321] with sharp increases recorded shortly after the onset of the pandemic. In the United States, opioid overdose deaths increased by 38 per cent between June 2019 and May 2020, compared with the same period in the year before, while overdose deaths involving cocaine, many of which also involved opioids, increased by 26 per cent.[322] In Philadelphia, COVID-19 has been associated with increases in opioid overdoses among non-Hispanic black individuals but with decreases among non-Hispanic white individuals. COVID-19 has also been linked with exacerbating pre-existing stressors, social isolation and economic deprivation disproportionately in black communities, possibly contributing to increased substance use.[323]

In Canada, the 1,638 opioid-related overdose deaths that occurred in the quarter April to June 2020 represented the highest quarterly count since national surveillance began in 2016,[324] and represented a 62 per cent increase compared with the previous quarter, January to March 2020, and a 58 per cent increase compared with the quarter April to June 2019. A city-level study identified an increasing occurrence of opioid-related deaths in isolated settings, attributed to pandemic-related measures that promoted physical distancing, which may have inadvertently reduced access to safer spaces in which to use drugs (for example, supervised consumption and treatment service settings) and access to support networks.[325]

use drugs: Implications for responding to COVID-19", *International Journal of Drug Policy* (2021).

320 Adrian Dunlop and others, "Challenges in maintaining treatment services for people who use drugs during the Covid-19 pandemic", *Harm Reduction Journal*, vol. 17, No. 26 (May 2020).

321 United States, Department of Health and Human Services, Centers for Disease Control and Prevention, "Overdose deaths accelerating during COVID-19".

322 United States, Department of Health and Human Services, Centers for Disease Control and Prevention, "Increase in fatal drug overdoses across the United States driven by synthetic opioids before and during the COVID-19 pandemic", 17 December 2020.

323 Utsha G. Khatri and others, "Racial/ethnic disparities in unintentional fatal and nonfatal emergency medical services: attended opioid overdoses during the COVID-19 pandemic in Philadelphia", *JAMA Network Open,* vol. 4, No. 1 (January 2021).

324 Canada, Public Health Agency of Canada, Special Advisory Committee on the Epidemic of Opioid Overdoses, "Opioid- and stimulant-related harms in Canada".

325 Canada, Ontario Drug Policy Research Network, Office of the Chief

Synthetic opioids, primarily illicitly manufactured fentanyl, have remained the primary drivers of overdose deaths in Canada and the United States during the pandemic. A study of opiate agonist clinics in Ontario, Canada, analysing medical records of patients, indicated a sharp increase in the use of fentanyl among people who had received opioid agonist treatment starting in April 2020, suggesting that the sharp increase in overdose deaths in 2020 may be linked to increased use of fentanyls.[326]

Some changes in drug-related deaths have been reported in Europe. Preliminary data from four European Union countries suggest that the overall number of drug-related deaths in 2020 may have been lower than in 2019 in two countries (Italy and Portugal), stable in one country (Czechia) and higher in one country (Finland).[327]

In Spain, although no increase in the number of drug overdose deaths was observed during the initial lockdown period, at least two facilities providing low-threshold services reported an increase in the number of drug overdose deaths after the ease of the restrictions in the country.[328]

## Reports of an increase in risky behaviour, increased vulnerability and related health consequences among people who use drugs and people with substance use disorders during the pandemic

An increase in more harmful practices has been observed among PWID during the pandemic. For example, in a study conducted in Australia among PWID, 9 per cent of the study participants reported an increase in reusing their own needles, and 13 per cent reported having injected alone more frequently between June and September 2020 than in February 2020. In addition, more than one third (36 per cent) of the participants reported a different frequency of past-month injection of drugs between June and September 2020 compared with February 2020: 25 per cent reported an increased frequency of injection, while 11 per cent reported a reduced frequency.[329] The majority of participants, however, reported that there had been no changes to their injecting practices since March 2020.

Signs of deteriorating health among people who use drugs were also observed in several countries in the early stages of the pandemic. In northern Italy, for example, between the end of February and the beginning of May 2020, it was found that patients with cannabis addiction and a diagnosis of obsessive-compulsive disorder, who were living in psychiatric residential treatment facilities, were significantly more likely to present to emergency psychiatric consultations during the initial lockdown period than other population groups.[330]

Moreover, in the Islamic Republic of Iran, people who smoked opium seemed to have an increased risk of adverse health consequences related to COVID-19. A pilot study conducted in April 2020 in the country found that about 1 in 10 patients admitted to a hospital for treatment of COVID-19 had been using opium, and that people who smoked opium seemed to be more susceptible to COVID-19 and have a higher mortality rate than those who did not smoke opium.[331] In Oceania, people who use drugs are considered to be at a greater risk than those who do not of contracting COVID-19 because they are more likely to have underlying health conditions and to be economically disadvantaged, homeless or even imprisoned.[332]

A group particularly vulnerable to the adverse health consequences of contracting COVID-19 are people living with HIV and substance use disorders. Lockdown measures and other related social and economic consequences of the pandemic may have led to an increase in substance misuse and poor management of HIV among this population group, although there is no conclusive evidence. Anecdotally, national experts from several countries, for example, Israel, Mexico and the Russian Federation, have

Coroner for Ontario/Ontario Forensic Pathology Service, Public Health Ontario, Centre on Drug Policy. Evaluation, "Preliminary patterns in circumstances surrounding opioid-related deaths in Ontario during the COVID-19 pandemic" (Toronto, Canada, 2020).

326 Kristen A. Morin and others, "Evidence of increased fentanyl use during the COVID-19 pandemic among opioid agonist treatment patients in Ontario, Canada", *International Journal of Drug Policy*, vol. 90 (2021).

327 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

328 Camila A. Picchio and others, "The impact of the COVID-19 pandemic on harm reduction services in Spain", *Harm Reduction Journal*, vol. 17, art. No. 87 (November 2020).

329 Peacock and others, *Australian Drug Trends 2020*.

330 Enrico Capuzzi and others, "Psychiatric emergency care during coronavirus 2019 (COVID-19) pandemic lockdown: results from a Department of Mental Health and Addiction of northern Italy, *Psychiatry Research*, vol. 293 (2020).

331 Majid Saeedi and others, "Opium addiction and COVID-19: truth or false beliefs", *Iranian Journal of Psychiatry and Behavioral Sciences*, vol. 14, No. 2 (April 2020).

332 Harm Reduction International, *The Global State of Harm Reduction 2020*.

emphasized the need for policy interventions during the COVID-19 pandemic to ensure the continuity of HIV and hepatitis C detection and the referral to treatment of people who use drugs, as these diseases expose patients to a greater risk of infection and potentially lethal complications related to underlying comorbidities. According to one practitioner, in Mexico, drug injecting has increased along with practices with a high risk of contracting HIV during the pandemic.[333]

In the United States, a study in the State of Wisconsin, found an increase in the use of substances such as heroin, pharmaceutical opioids, cocaine, methamphetamine and sedatives among people living with HIV during the first half of 2020, compared with the period prior to onset of the pandemic. The study also found that the proportion of people living with HIV who were missing out on vital medication had also increased in the first half of 2020.[334] These patterns are corroborated by the findings of another study that looked at patients receiving services at a medical centre in Boston, which found an alarming incidence of HIV among PWID during COVID-19. [335]

In European Union countries, indications for a potential drop in testing for HIV and viral hepatitis during lockdown periods were found, with the vast majority of countries reporting that less than half of the expected number of people had been tested during the first months of the pandemic.[336] However, data on possible changes in HIV and viral hepatitis infections are not yet available.

In Africa, an emergency response to COVID-19 was released that emphasized the increased vulnerability of people who use drugs because of underlying health conditions associated with drug use, stigma and marginalization.[337] Moreover, it was found that vulnerable populations have been impacted the most by the situation created by the pandemic, including by a lack of access to housing and health care, and disruptions in the provision of services to people who use drugs.[338]

333 Responses to the UNODC-WHO Informal Scientific Network survey 2021.

334 Karli R. Hochstatter and others, "Potential influences of the COVID-19 pandemic on drug use and HIV care among people living with HIV and substance use disorders: experience from a Pilot mHealth Intervention", *AIDS and Behavior*, vol. 25, No. 2 (February 2021).

335 Jesse L. Taylor and others, "A collision of crises: addressing an HIV outbreak among people who inject drugs in the midst of COVID-19", *Journal of Substance Abuse Treatment*, vol. 124 (2021).

336 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons.*

337 West Africa Drug Policy Network, WADPN emergency response to COVID-19 prevention and control among people who use drugs in West Africa", 24 April 2020.

## Some people who use drugs have adopted protective approaches to their drug use practices

There is evidence that people who use drugs have made behavioural adjustments in order to avoid contracting COVID-19 and evidence of potential harms resulting from drug use in lockdown conditions, such as harms due to reduced access to equipment such as sterile needles and syringes. For example, almost half of the participants (48 per cent) in the global online survey conducted in May and June 2020 among people who had recently used drugs reported having changed some of their drug purchasing practices as a consequence of COVID-19. This included washing and/or sanitizing hands immediately after a purchase, buying drugs in greater quantities than usual in order to reduce the number of transactions and making the exchange quicker than usual.[339]

Furthermore, in a study conducted from June to September 2020 among PWID in Australia, 28 per cent of the participants reported having sought information on how to reduce the risk of contracting COVID-19 or how to mitigate risks resulting from mobility restrictions on drug acquisition and use. Some 82 per cent of participants reported having engaged in various harm-reduction behaviours to reduce the risk of contracting COVID-19 or the impact of COVID-19-related restrictions while using or obtaining drugs. These included washing hands before handling drugs or money, stocking up on sterile drug use equipment and wiping down drug packages with soap or sanitizer.[340] Finally, according to reports from Kyrgyzstan, some people who use drugs became more concerned about their health after the onset of the pandemic and started using their own paraphernalia exclusively instead of sharing them.[341]

338 Harm Reduction International, *The Global State of Harm Reduction 2020.*

339 Global Drug Survey, "GDS COVID-19 special edition".

340 Peacock and others, *Australian Drug Trends 2020.*

341 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia".

# IMPACT ON DRUG DEMAND





## Impact of the COVID-19 crisis on drug service provision for people who use drugs

The COVID-19 pandemic and restrictions to contain the spread of the virus have limited services for people who use drugs across all regions. The restrictions have disrupted, at least partially, treatment of drug use disorders, prevention of adverse health consequences, and treatment of comorbidities such as HIV, hepatitis C and tuberculosis.[342, 343, 344]

Not being able to access drug treatment services is a particular concern for clients in opioid agonist maintenance therapy who need to obtain medication on a daily basis, as interruptions in medication can increase the risk of relapse, overdose or death.[345] In some countries, limited treatment services intersected with disruptions reported in the supply of opiates during the initial lockdown periods. With people who regularly use opioids not being able to manage their drug use dependence, services in many countries across all regions witnessed an increase in withdrawal symptoms and therefore in the demand for treatment for opioid use disorders, including opioid agonist treatment.[346]

However, the closure of non-essential health services and the reassignment of resources to manage acute COVID-19 cases resulted in a sudden and uncoordinated discontinuation of services for people with drug use disorders during the initial lockdown periods. The management of COVID-19 cases and related quarantine led to increased demand for hospital beds as experts in some countries (for example in Central Asia and West and Central Africa) reported that beds dedicated to inpatient treatment of people with drug use disorders were used to accommodate COVID-19 cases. Another challenge was the availability of personnel: during periods when the numbers of COVID-19 cases were high, medical staff were transferred to attend to COVID-19 cases, and in some cases the amount of personnel available was reduced, often because of obligatory periods of quarantine or a lack of personal protective equipment available for staff.[347]

Experts from the vast majority of countries (88 per cent) reported that the necessary medical and psychiatric care for people with substance use disorders had continued during the pandemic, but only to some extent.[348] Drug services ceased operating in some places, while services were reduced, or drug services stopped accepting new clients, in others. The latter was mainly because of an existing ceiling in, for example, the number of treatment slots in opioid agonist treatment programmes but, in some instances, drug services also faced shortages of medicines or financial resources.[349]

Physical distancing and mobility restrictions made the delivery of low-threshold services and outreach programmes (e.g., to homeless people) challenging. Face-to-face counselling and the provision of sterile injecting equipment or naloxone was discontinued in some countries in order to adhere to physical-distancing measures. Linked to the limited accessibility of health-care services, the poor economic status not uncommon among people who regularly use drugs was a concern during the initial lockdown periods, as it generally exacerbated health risks among people who use drugs. National experts reported that refugees and immigrants,[350]

342 Felipe Ornell and others, "The COVID-19 pandemic and its impact on substance use: implications for prevention and treatment", *Psychiatry Research*, vol. 289 (2020).

343 Lola Kola, "COVID-19 mental health impact and responses in low-income and middle-income countries: reimagining global mental health", *The Lancet Psychiatry*, 24 February 2021.

344 WHO, *The Impact of COVID-19 on Mental, Neurological and Substance Use Services: Results of a Rapid Assessment* (Geneva, 2020).

345 Rolando Tringale and Andrew M. Subica, "COVID-19 innovations in medication for addiction treatment at a Skid Row syringe exchange", *Journal of Substance Abuse Treatment*, vol. 121 (2020).

346 Harm Reduction International, *Global State of Harm Reduction 2020*.

347 Seyed Ramin Radfar and others, "Reorganization of substance use treatment and harm reduction services during the COVID-19 pandemic: a global survey", *medRxiv* (2020).

348 Ibid.

349 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries, EMCDDA trendspotter briefing (December 2020).

350 Ramin Radfar and others, "Reorganization of substance use treatment and harm reduction services during the COVID-19

## Summary: main reasons for the disruption of services provided to people with drug use disorder during the initial lockdown periods

The COVID-19 crisis posed immense challenges to health systems across the globe and disrupted or limited services for people with drug use disorders in the early stages of the pandemic. The most common reasons for service disruptions were:

- Drug treatment services being initially designated as non-essential services and therefore halted.
- A lack of available personnel for delivering services, often exacerbated by a lack of personal protective equipment.
- Initial closure of services to avoid the transmission of COVID-19 among clients. Services often reopened after making adjustments in order to adhere to physical-distancing and other preventive measures.
- Difficulties faced by people with drug use disorders in accessing services as a result of stay-at-home orders, curfews and mobility restrictions.
- A reluctance by people with drug use disorders to access services for fear of being infected with COVID-19.
- Resources such as hospital beds for inpatient services for people with drug use disorders being used to accommodate COVID-19 patients, leading to an overall reduction in places available for drug treatment.
- Shortages in the supply of medication used in opioid agonist treatment, such as methadone and buprenorphine.

homeless people and sex workers[351] were among the groups of people who use drugs who faced significant difficulties in accessing drug treatment services during the initial stages of the pandemic. However, this does not imply that, in general, people who use drugs may not have encountered difficulties in accessing drug treatment services, as this is influenced by a variety of factors and personal circumstances.

In some situations, people who use drugs may have encountered greater stigma when accessing services during the pandemic that was related, for example, to increased social pressure when trying to access treatment under lockdown measures.[352, 353]

As explained further below, many Member States reacted quickly by adapting existing services and introducing innovations that allowed for a continuation of services while adhering to measures to prevent the spread of COVID-19. Across all regions, many countries have embraced the use of telemedicine and telecommunications technologies and allowed medical assessments and prescriptions of medication without the need for an in-person appointment. Internet-based services have been used increasingly to provide training and counselling services to staff, allowing for a cost-effective alternative to in-person training. It is not clear if these innovative approaches were adopted as temporary solutions or if they will continue once the pandemic is over.

The delivery of low-threshold services has been facilitated in many cases by contactless distribution methods, such as the introduction of vending machines for dispensing sterile injecting equipment and opioid agonist medication, and an increase in the amount of equipment and medication provided to people with drug use disorders in order to reduce the need for appointments and repeat visits.

Moreover, a major change in policies regulating treatment of drug use disorders, including opioid agonist treatment, has been implemented in many Member States. Instead of requiring patients to attend facilities on a near-daily basis and to take medication onsite, often in the presence of staff, patients have been provided with take-home doses covering extended periods, of up to 28

pandemic".

351 Responses to the UNODC-WHO Informal Scientific Network survey 2021.

352 Adrian Dunlop and others, "Challenges in maintaining treatment services for people who use drugs during the Covid-19 pandemic", *Harm Reduction Journal*, vol. 17, No. 26 (May 2020).

353 Divya Bhanot and others, "Stigma and discrimination during COVID-19 pandemic", *Frontiers in Public Health*, vol. 8, art. No. 577018 (January 2021).

days, and face-to-face meetings have been suspended or replaced by remote meetings. In many countries, pharmacies have also been allowed to directly dispense opioid agonist medication for the treatment of opioid use disorders.

In general terms, the ways in which services were adapted to the changed circumstances brought about by the COVID-19 pandemic and the changes that emerged can be clustered under four broad patterns:

- Services that offered in-person, in-patient services appeared to have been more affected than low-threshold services. They either closed or their activities were significantly reduced while stay-at-home orders were enforced. In most countries, this situation was largely temporary in the initial stages of the pandemic.
- The number of services that offered or were able to begin offering technology-enabled care increased during the pandemic. For example, some Member States extended the range of health services to cover telemedicine, allowing for initial assessments and prescriptions of medication without face-to-face meetings and through the use of telecommunications channels (including audio-only). These steps increased the accessibility of health services where patients had the necessary hardware and Internet connectivity.
- Some of the services for people who use drugs set up new, contactless delivery systems that distributed sterile needle and syringes and medication to people who use drugs while adhering to physical-distancing measures. For example, in the United States of America and in the European Union, some needle-and-syringe exchange programmes increased the amounts of needles and syringes and other equipment dispensed at a time to cover a longer time period than previously allowed and to allow people who use drugs to distribute them to other people who inject drugs.
- Policy for medication-assisted treatment for opioid use disorders, in particular opioid agonist treatment policy, was made more flexible in many countries to adhere to physical-distancing measures during the pandemic. This included, for example, scaled-up take-away doses and medicine packages in larger supply that allowed for multi-day doses instead of requiring daily visits.

In summary, the COVID-19 crisis has prompted a wave of innovative approaches in some countries to providing services under difficult circumstances to people who use drugs and people with drug use disorders by adjusting regulations and leveraging technology. Whether or not some or all innovations will last beyond the pandemic is yet to be seen. Initial evaluations of some approaches point to their efficacy.[354, 355] In Argentina, for example, a study was done on the effectiveness of intensive outpatient treatment services, including group and individual meetings, for substance use disorders delivered remotely over a videoconference platform. Preliminary results suggest that the services delivered remotely are as effective as those delivered using a face-to-face intensive ambulatory approach.[356] The success of the adaptations and innovations adopted during the COVID-19 pandemic will increase the likelihood of them being sustained beyond the COVID-19 crisis, thereby offering greater flexibility for people in need of such services.

## Across all regions, services for people with drug use disorders have been at least partially disrupted by the COVID-19 crisis, while some treatment demand has increased

A rapid global assessment, conducted between June and August 2020, of service delivery for mental health and neurological and substance use disorders during the early stages of the COVID-19 pandemic[357] found that critical services for the prevention of adverse health consequences among people with drug use disorders were partially or completely disrupted in 65 per cent of reporting countries, opioid agonist treatment for opioid use disorders in 45 per cent of countries, and overdose prevention and management programmes in 53 per cent of countries.

In a global survey of high-, middle- and low-income countries (77 countries in total), addiction medicine professionals described a similar situation, with some treatment and prevention services disrupted in the initial stages of the pandemic.[358] Overall, professionals in the

354 Rebeca Faur and others, "Expanding accessibility: outpatient intensive treatment for substance use disorder during COVID-19 pandemic", *Drug Alcohol Dependence*, vol. 218 (2021).

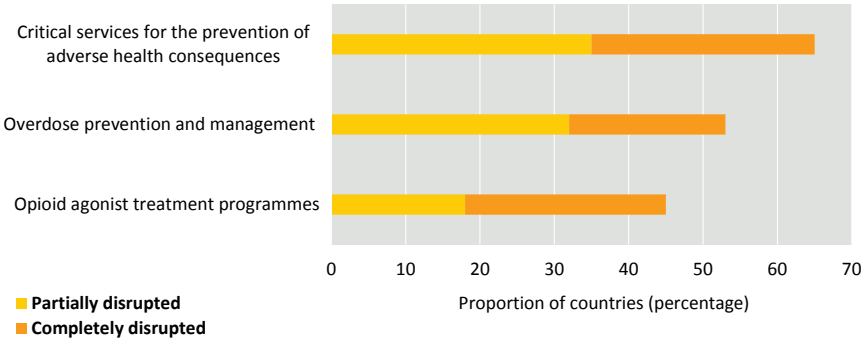
355 Harm Reduction International, *Global State of Harm Reduction 2020*.

356 Faur and others, "Expanding accessibility: outpatient intensive treatment for substance use disorder during COVID-19 pandemic".

357 WHO, *The Impact of COVID-19 on Mental, Neurological and Substance Use Services*.

358 Ramin Radfar and others, "Reorganization of substance use treatment and harm reduction services during the COVID-19 pandemic".

**FIG. 34** **Disruptions experienced by countries to substance use disorder services, during the early stages of the COVID-19 pandemic**




Source: WHO, *The Impact of COVID-19 on Mental, Neurological and Substance Use Services: Results of a Rapid Assessment* (Geneva, 2020), p. 14.

*Note: Based on data from 130 countries. Data was collected between June and August 2020. Partially disrupted services are defined as those services that were not able to serve between 5 and 50 per cent of patients 'as usual'; completely disrupted services are defined as those that were not able to serve more than 50 per cent of patients as usual.*

vast majority of countries (88 per cent) reported that the necessary medical and psychiatric care for people with substance use disorders had continued, but only to some extent. Shortages of methadone and buprenorphine supplies for opioid agonist treatment were reported by addiction medicine professionals in 38 per cent of countries and a partial discontinuation of certain services, such as needle-and-syringe programmes and condom distribution, in 41 per cent of countries. Overdose-prevention interventions, in particular the distribution of naloxone, were negatively affected in 57 per cent of countries. Services targeting some population groups seem to have been disrupted more frequently across countries, irrespective of the country's income level. National experts in 75 per cent of countries reported that existing drug-related services for children, women, pregnant women and refugees or immigrants faced limitations during the initial stages of the pandemic. Respondents in 81 per cent of countries reported that, as a result of lockdown policies, people with drug use disorders who were homeless faced difficulties in accessing outreach services.

In many countries, services for people with opioid use disorders saw an increase in the number of patients with withdrawal symptoms and in the demand for opioid agonist treatment.[359] This was reported, for example, in countries in Central Asia[360] and in other countries in Asia,[361] in Eastern and South-Eastern Europe[362] and in Southern Africa.[363] During the initial lockdowns, some people who regularly use opioids were faced with reduced access to opioids because of, for example, supply disruptions, limited financial means and/or limited options for purchasing drugs. They were therefore not able to manage their drug use behaviour.[364, 365, 366] There were also reports that some people who use opioids opted for opioid agonist treatment as a stopgap arrangement and that, once the restrictions were lifted and opioids became more readily available, there would be an increase in the likelihood of those people resuming their previous

359 Harm Reduction International, *Global State of Harm Reduction 2020.*

360 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services and harm reduction programmes in Central Asia".

361 Harm Reduction International, *Global State of Harm Reduction 2020.*

362 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

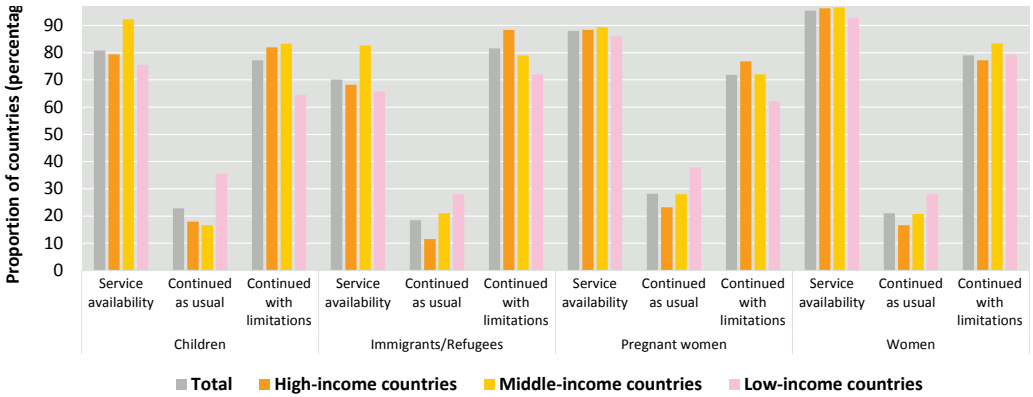
363 Central Drug Authority of South Africa, presentation made available to UNODC.

364 Harm Reduction International, *Global State of Harm Reduction 2020.*

365 Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

366 EMCDDA, EU *Drug Markets: Impact of COVID-19* (Luxembourg, Publications Office of the European Union, 2020).

FIG. 35 Availability of drug treatment services for certain population groups during the initial stages of the COVID-19 pandemic, 2020




Source: Sayed Ramin Radfar, "Reorganization of substance use treatment and harm reduction services during the COVID-19 pandemic: a global survey", *medRxiv* (September 2020).

*Note: Data are based on the responses of experts from 77 countries in all regions. Averages of the responses were calculated regardless of the number of respondents in each country.*

pattern of opioid use and thus being at increased risk of overdose.[367]

## Africa

Reports from East, West and Central and North Africa indicated that the already limited programmes for preventing drug use were discontinued, at least temporarily, during the initial stages of the pandemic and that access to the limited services available (such as needle-exchange programmes) for preventing adverse health consequences caused by drug use decreased. Some Government-run services closed down, while in some locations drug services remained open or were reopened with the help of non-governmental organizations.[368, 369, 370, 371]

More specifically, some countries reported a hiatus in the admission of new clients to opioid agonist treatment. Such treatment was subsequently resumed with a smaller number of clients per group in order to adhere to physical-distancing guidelines.[372] The availability of medications for drug treatment further deteriorated, according to experts from Ghana.[373] One African country reported a decrease in attendance at some centres providing HIV services, including antiretroviral treatment, and the closure of a centre for minors and young people with drug use disorders because the hospital was being used for quarantining COVID-19 patients.[374] In Mauritius, the needle-syringe programme was discontinued during the lockdown in 2020 because of potential risks related to overcrowding. Opioid agonist treatment with methadone was allowed to continue while social mobility restrictions were enforced by enabling clients to access drug treatment at dispensing points. A service run by non-governmental organizations providing codeine-based therapy established in the 1980s initially ceased to operate during the lockdown in 2020. The programme restarted its operations after implementing a series of changes to contact clients by phone and direct them to a medical centre for the renewal of prescriptions and collection of medicines. HIV services, including

367 Harm Reduction International, *Global State of Harm Reduction 2020.*

368 Assessment by the UNODC Regional Office for West and Central Africa.

369 For example, Mauritius (assessment made available by the African Union).

370 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in south European Neighbourhood Policy area" EMCDDA trendspotter briefing (September 2020).

371 Harm Reduction International, *Global State of Harm Reduction 2020.*

372 Reports made available by the African Union.

373 Responses to the UNODC–WHO Informal Scientific Network survey 2021.

374 Reports made available by the African Union.

antiretroviral treatment, continued during the lockdown; however, attendance was reported to have decreased in some centres.[375]

Mobility restrictions and physical distancing were among the main reasons for limiting the delivery of and access to services for people who use drugs.[376] Many services were disrupted because of travel restrictions, staffing issues and a lack of personal protective equipment.[377, 378] In Nigeria, women who use drugs were reportedly more likely to avoid drug use treatment because of stigma, lack of support from partners or family members or fear of being apprehended by the police;[379] in Senegal, some people who use drugs reportedly avoided seeking treatment for fear of contracting COVID-19.[380]

## Americas

In North America, people with substance use disorders in the United States had to wait longer to obtain treatment during the initial stages of the pandemic than previously because of an increase in demand, changes to operating hours and the closure of treatment centres. A national survey of 1,079 people with substance use disorders in the United States found that more than a third of respondents had experienced disruptions in their access to treatment or recovery support services since the start of the pandemic, while 14 per cent reported being unable to obtain required services.[381] Meanwhile, in Canada, a city-level study found that physical-distancing measures may have resulted in a reduction in the capacity of pharmacies, outpatient clinics and facilities that provide care to people who use drugs and that this may have increased the risk of lethal opioid overdoses.[382]

Experts from Mexico reported a disruption in the provision of drug treatment services one month after the first case of COVID-19 was identified in the country. This is largely because treatment services remained open only for emergencies and operated with limited personnel. Demand for treatment fell by over 80 per cent, mainly for cannabis and cocaine use, although there was increasing demand for services by methamphetamine users.[383]

In South America, the response to the COVID-19 pandemic and the impact of the pandemic on the delivery of drug services differed across countries. Experts reported that, in some countries, such as Brazil, there was an initial disruption of drug treatment services, while in others, such as Colombia, people had difficulty accessing medications, such as methadone, for the treatment of opioid use disorders. In Peru, prevention services for people who use drugs continued to operate remotely during the first lockdown. For example, the "Habla Franco" service continued to provide psychological counselling and specialized interventions for the prevention of drug use by means of online chat applications and emails, and over a dedicated telephone helpline that was accessible free of charge.[384] In Uruguay, where no full lockdown was implemented, drug treatment services reported that their work remained unaffected in comparison with other countries in the region. Services aimed at preventing adverse health consequences among people who use drugs further reduced their already limited capacity in some of the countries in South America and the Caribbean. In Colombia, for example, contact with those services has been reported as being reduced because of physical-distancing restrictions and, in the Dominican Republic, the needle-syringe programme was completely suspended for reasons of staff safety.[385]

## Asia

In Central Asia, the observed decrease in the availability of opiates in the early stages of the pandemic led to an increase in the demand for drug treatment in several countries at the same time that the availability of drug

375 Response submitted by Mauritius in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

376 Assessment by the UNODC Regional Office for West and Central Africa.

377 UNODC, Regional Office for West and Central Africa, "L'ONUDC fournit des équipements de protection contre COVID-19 pour protéger les usagers de drogues sous traitement au Sénégal", 17 July 2020.

378 Responses to the UNODC–WHO Informal Scientific Network survey, 2021.

379 Ediomo-Ubong Ekpo Nelson, Emeka W. Dambli and Ogochukwu Winifred Odeigah, "Drug use treatment during COVID-19 pandemic: community-based services in Nigeria", *Journal of Substance Use* (2020).

380 Reported to UNODC by the Centre de Prise en Charge Intégrée des Addictions de Dakar, Senegal, February 2021.

381 Nora Volkow, "Addressing the unique challenges of COVID-19 for people in recovery", National Institute on Drug Abuse, 14 September 2020.

382 Canada, Ontario Drug Policy Research Network, Office of the Chief Coroner for Ontario/Ontario Forensic Pathology Service, Public Health Ontario and Centre on Drug Policy Evaluation, "Preliminary patterns in circumstances surrounding opioid-related deaths in Ontario during the COVID-19 pandemic".

383 Responses to the UNODC–WHO Informal Scientific Network survey 2021.

384 DEVIDA, "Servicio habla Franco de Devida continuará brindando atención de forma remota", 15 May 2020, press release.

385 Harm Reduction International, *Global State of Harm Reduction 2020.*

treatment decreased as a result of COVID-19-related measures, including the prioritization of beds for COVID-19 patients. In the context of the pandemic, some drug treatment facilities and services for preventing adverse health consequences of drug use had to limit the range of their services and turned to online counselling services.[386]

In South Asia, the lockdowns implemented in India made it more difficult for people with substance use disorders, particularly some population groups such as adolescents, women and older adults, to access health-care facilities, as a lack of, or reductions in, public transport provision had a negative impact on access to treatment centres, especially for those from socioeconomically disadvantaged backgrounds. This is considered of particular concern for those who require access to medications for opioid agonist treatment on a daily basis.[387]

In East and South-East Asia, the number of people admitted to treatment for drug use disorders in most countries remained at similar levels during the initial stages of the pandemic as in the previous year, but some countries saw a decrease because of strict mobility restrictions, a suspension of admissions and a shift in government priorities from treatment for drug use disorders to treatment for COVID-19.[388, 389]

## Europe

A survey of national focal points from Norway and European Union countries carried out in April 2020 suggested that the impact of COVID-19 and the related lockdown measures resulted in some reduction in the availability of treatment and services for people who use drugs in most European countries during the first two months of the pandemic:[390] 12 countries reported a slight decrease and 3 reported a large decrease; 2 countries reported a slight increase, while 5 countries reported no change.

In Spain, for example, a survey of 11 centres providing low-threshold services found that the average number of people utilizing any service declined by 22 per cent, the average number of needles distributed decreased by 40 per cent and there was a decline in the rate of testing for HIV, hepatitis B and C and tuberculosis in March, April and May 2020 compared with the same period in 2019, which possibly aggravated the health risks of those who continued to use drugs.[391]

The results of a survey conducted in Europe to assess the impact of COVID-19 on testing for HIV, viral hepatitis and sexually transmitted infections indicated that 95 per cent of respondents from 34 countries reported conducting less than half the expected number of tests between March and May 2020 compared with the same period in 2019.[392] This pattern continued to a lesser extent between June and August 2020, when most countries had relaxed COVID-19-related restrictions.

Drug-checking services were disrupted by lockdown measures and related closures in the night-time economy and absence of festivals. A 26 per cent decrease in the total number of samples submitted for testing in European drug-checking services was reported in 2020 compared with 2019, with the largest drop observed in the second quarter of 2020. However, submission of drug samples by mail to drug-checking services increased during all quarters of 2020 compared with 2019.

In Eastern and South-Eastern Europe, a lack of human resources interrupted the provision of drug services during the initial stages of the pandemic, mainly because staff were not able to reach service locations. In addition, a lack of personal protective equipment prevented staff from providing face-to-face services, or affected their ability to do so.[393]

While stay-at-home orders were enforced, telemedicine became a viable option in the Balkan countries, as psychosocial and counselling services could no longer be provided in person. This method created obstacles for

386 UNODC, Regional Office for Central Asia, "Brief overview of COVID-19 impact on drug use situation as well as on the operations of the drug treatment services".

387 Sidharth Arya and Rajiv Gupta, "COVID-19 outbreak: challenges for addiction services in India", *Asian Journal of Psychiatry*, vol. 51 (2020).

388 Data collected by the UNODC Regional Office for South-East Asia and the Pacific.

389 M. J. Stowe and others, "Access to healthcare and harm reduction services during the COVID-19 pandemic for people who use drugs", *Journal of Addiction Medicine*, vol. 14, No. 6 (December 2020), pp. e287–e289.

390 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe", EMCDDA trendspotter briefing (May 2020).

391 Camila A. Picchio and others, "The impact of the COVID-19 pandemic on harm reduction services in Spain", *Harm Reduction Journal*, vol. 17, art. No. 87 (November 2020).

392 Daniel Simões and others, "Impact of the COVID-19 pandemic on testing services for HIV, viral hepatitis and sexually transmitted infections in the WHO European Region, March to August 2020", *Euro Surveillance*, vol. 25, No. 47 (November 2020).

393 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

some clients, such as people who use drugs who had limited or no access to the Internet. Home delivery of opioid agonist medication was reported to have been provided while travel restrictions were enforced, with the assistance of police and charity organizations. Some treatment centres, such as the "Opioid Substitution Centre" in Kotor, Montenegro, provided certificates to clients that would allow them to travel for treatment.[394]

## Oceania

In Australia, a study on the impact of the pandemic on the alcohol and other drug use services provided by non-governmental organizations in selected states found that about a fifth of the services had experienced increased costs (for example, owing to investments in information and communications technology infrastructure and workforce training, personal protective equipment, and cleaning products and services) and two fifths had reported a reduction in financial resources, owing to reduced donations and as a result of reduced bed numbers and occupancy rates.

Almost all programmes adapted their service delivery, often by introducing innovations. Programmes reported that they were able to successfully use video technology (81 per cent) and telephone (78 per cent) for clinical care; 78 per cent reported no problems with switching to Internet, telephone and/or video technology for clinical care, 53 per cent reported increased person-centred practice, 50 per cent switched to online counselling services and 50 per cent were able to offer more flexible appointments.

Technology-based services enabled continuity of care during COVID-19 and even allowed for the expansion of the reach of some services (particularly to rural areas), while protecting service providers from the risk of infection. It also increased communication between staff, and between staff and clients, and allowed for more flexible work arrangements.

However, it was reported that technology-based services had limitations (e.g., some clients had no access to the Internet or a telephone, poor Internet connection affected delivery and engagement with clients was reduced) and were not suitable for all client groups and treatment types,

394 EMCDDA, "Impact of COVID-19 on drug use and drug services in Western Balkans".

## Drug service provision for population subgroups affected by drug use disorders during COVID-19

In the context of the pandemic and related lockdown measures, several population groups of people with drug use disorders, such as sex workers and homeless people, were severely affected by income loss.[a] Countries' responses to this situation included providing targeted services in a timely manner to mitigate the potential adverse effects of the pandemic on the health and well-being of people in those subgroups.

### Women who use drugs

Women with drug use disorders encounter multiple barriers such as stigma and gender-based violence when accessing support for drug treatment services.[b] Services equipped to provide support that comprehensively addresses the interaction between drug use and experiences of gender-based violence are not widely available.

Women with drug use disorders may face greater vulnerabilities because of income loss and gender-based violence in the context of COVID-19, which may exacerbate their victimization and risk of exploitation. Currently, there is limited evidence available to inform gender-specific and gender-sensitive responses to support women with drug use disorders in the context of the COVID-19 pandemic.[c] Evidence collected in the aftermath of previous events that caused significant social instability can help explore the impact those events have had on women who use drugs and can offer possible guidance for policy interventions related to COVID-19.[c] For example, participants in an ethnographic study assessing the impact of Hurricane Katrina on people who use drugs reported that women who use drugs were perceived as being weak immediately after the hurricane and had their drugs stolen by men.[d]

Closures and reduced activities during confinement measures can pose additional barriers to this subpopulation group when attempting to access services for drug treatment and gender-based violence.

Some programmes have tried to address this double challenge. For example, an organization in Kenya trained people who use drugs in basic counselling and mediation skills to document, report and monitor cases of gender-based violence, as part of a community-led intervention to tackle gender-based violence resulting from COVID-19-related mobility restrictions. Some of the

clients supported by this intervention after the third quarter of 2020 were women who use drugs. Targeted support for women who use drugs during COVID-19 was also provided by this organization through income-generating initiatives such as the manufacture and selling of soap.[d]

A non-profit organization based in Barcelona, Spain, runs a programme exclusively for women and gender-non-conforming people, offering psychosocial and drug treatment services through a transdisciplinary team.[b] Their clients include survivors of intimate partner violence, sex workers, homeless people and migrants. During COVID-19, the organization supported people with drug use disorders to access a specialized shelter with a supervised consumption space.[e]

## Sex workers

During the pandemic, some programmes considered sex workers as one of the target groups for whom to ensure the continuity of services. In Israel, for example, service providers used COVID-19 as an opportunity to increase mental health services for patients with drug use disorders and made efforts to take population groups with specific needs into consideration. There was a greater demand for detoxification services by sex workers suffering from substance use disorders during the pandemic; hospital beds were therefore allocated specifically for this population group.[f]

A non-governmental organization located in Prague, Czechia, provided street-based sex workers with counselling services and ensured access to a stimulant agonist treatment programme free-of-charge during the pandemic.[e]

## Homeless people

Homeless people were also specifically targeted for service delivery during the pandemic. In the city of Dublin, Ireland, homeless people were identified as a vulnerable group among people with drug use disorders, given their morbidity profile, living conditions and drug use behaviour. Protocols to identify and ensure immediate testing for homeless clients with COVID-19 symptoms were implemented early on. Homeless clients considered vulnerable because of old age or certain medical conditions were provided with single-occupancy accommodation to shield them from infection. There was also an expansion of drug treatment services that led to improved access to opioid agonist treatment, improved access to naloxone and shifting the management of high-dose benzodiazepine dependency towards maintenance therapy, including the home delivery of pharmaceutical drugs such as methadone and benzodiazepines.[g]

The findings of an assessment using qualitative and quantitative research methods conducted in October 2020 in Australia indicated that there has been a shift towards technology-based services for clients in need of drug treatment services. Homeless people were left at a disadvantage, however, as they encountered barriers to accessing such treatment services because of a lack of equipment for video-based services. The survey responses also indicated the need for increased funding flexibility to ensure that service provision could be adapted to changing settings while social mobility restrictions and stay-at-home orders were enforced. For example, one service provider allocated funding for the purchase of telephones for clients, including homeless people, as services provided in person were curtailed.[h]

In South Africa, government policy implemented in the context of the pandemic sought to ensure protection for homeless people and people with drug use disorders by establishing temporary shelters.[i] The measures were implemented by civil society organizations in consultation with those vulnerable communities. In major cities in South Africa, health services were provided for 2,300 homeless people in shelters, and existing opioid agonist treatment clients were given weekly take-home doses. Among the homeless people in shelters, approximately 1,200 initiated methadone treatment.

a Harm Reduction International, *Global State of Harm Reduction 2020*.

b Shirley-Beavan, S., et.al., "Women and barriers to harm reduction services: a literature review and initial findings from a qualitative study in Barcelona, Spain", *Harm Reduction Journal*, vol. 17, No. 78 (2020).

c Sarah Larney and others., "Rapid review of the impacts of "Big Events" on people who use drugs and delivery of harm reduction and drug treatment services: Implications for strengthening systems in response to Covid-19", *Canadian Institute of Health Research* (November 2020).

d Eloise Dunlap, Jennifer L. Graves and Ellen Benoit., "Stages of drug market change during disaster: Hurricane Katrina and reformulation of the New Orleans drug market", *International Journal of Drug Policy*, vol. 23, No. 6 (2012), pp. 473–480.

e EHRA, *Harm Reduction Rervice Delivery to People Who Use Drugs During a Public Health Emergency: Examples from the Covid-19 Pandemic in Selected Countries* (November 2020).

f Responses to the UNODC-WHO Informal Scientific Network survey 2021.

g Austin O'Carroll, Tony Duffin and John Collins, "Harm reduction in the time of COVID-19: case study of homelessness and drug use in Dublin, Ireland", *International Journal of Drug Policy*, vol. 87 (2021).

h Van de Ven, Ritter and Stirling, "The impact of the Covid-19 pandemic on the non-government alcohol and other drug sector".

i South Africa, Central Drug Authority, "Impact of Covid-19" (June 2020).

## Infection prevention and control measures in prison settings during COVID-19

The pandemic has made prisons and places of detention more vulnerable than ever before. People who are imprisoned or detained have a disproportionate risk of contracting COVID-19 compared with the general population, particularly when facing overcrowded living conditions, unsanitary facilities, poor ventilation and additional barriers to accessing health care and treatment services for drug use disorders. Persons deprived of their liberty can also be more likely to have underlying health conditions and may face a higher prevalence of HIV, viral hepatitis and tuberculosis, which increases their vulnerability to a COVID-19 infection.[a, b] Disruptions to treatment services in correctional facilities during the COVID-19 pandemic may also increase the risk of HIV and hepatitis C transmission as they can create an environment in which people in prison may increasingly share injecting equipment.[c] This may also lead to increased sharing of non-injecting equipment, such as cookers, pikes and vapes, which may also increase the risk of a COVID-19 infection.

Prison systems around the world have been affected by COVID-19 and many countries around the world have adopted emergency release mechanisms to reduce the prison population. Since March 2020, at least 700,000 people – approximately 6 per cent of the more than 11.5 million people behind bars globally – have been authorized or considered eligible for release through emergency release mechanisms adopted by 119 Member States.[d] The overall number of prisoners authorized or eligible for release outside of these 119 Member States is unknown, so the total global number of releases is likely to be substantially higher, considering that some of the most populous countries are not included in this count.

In most countries, the criteria used to identify those suitable for release included: (a) profile and condition of a prisoner (age, health condition, gender and whether they had been convicted for a first-time offence); (b) behaviour in prison; (c) length of original sentence; (d) remaining time to serve; and (e) type of offence (whether serious or violent). As a result, candidates identified as eligible for release were mainly prisoners convicted for non-violent offences, vulnerable persons and prisoners who had served the majority of their sentence. There was no clear pattern on the inclusion or exclusion of drug-related offences in release criteria. While drug trafficking offences were explicitly excluded from release eligibility in some countries, there was no discernible trend with regard to personal possession offences.[d]

Significant disparities have been observed across countries regarding the ability of prison systems to implement mitigation measures related to COVID-19 and ensure the continuity of treatment services for drug use disorders. Experts in Lebanon, for example, indicated that it was challenging to provide medical care and implement preventive measures related to COVID-19 for people with drug use disorders in prison settings. Experts in Kenya reported that the policy response to COVID-19 implemented in prison settings was to release prisoners serving short sentences to curb the transmission of the virus and reduce overcrowding. Access to treatment for people with drug use disorders was thus curtailed.[e]

In most European Union countries, the provision of drug treatment services in prisons was reduced throughout 2020, although efforts were made to ensure continuity of opioid agonist maintenance treatment, as well as testing and treatment for infectious diseases. Between March and June 2020, 15 European Union countries with available data reported severe disruptions to drug use services in prisons, including psychosocial counselling, group therapy and peer-led interventions, and these disruptions continued throughout 2020 at least to a certain degree. In a few countries, such as France and Luxembourg, drug use services were scaled up again as of June 2020. Reduced use and reduced availability of drugs in prisons was also observed in several European Union countries during the first lockdown in 2020. Some national experts suggested that the limited availability of drugs during the first lockdown may have reduced the use of drugs in prison settings.[f]

In the United States, many prisons had to curtail or reduce opioid agonist maintenance treatment and implemented changes to medication dispensation processes in the early stages of the pandemic (second quarter of 2020).[g] Some prisons adapted their services, for example, before the pandemic, a prison in Greenfield, Massachusetts, provided detained populations with access to all three medications used in the treatment of opioid use disorders: buprenorphine, methadone and naltrexone. After the pandemic broke out, comprehensive mitigation policies were

implemented to prevent the spread of COVID-19 and programmes related to treatment for opioid use disorders were adapted. Such treatment was provided in housing units directly, and not in groups as had been done before the outbreak of COVID-19. Quarantined individuals received medication in their cells.[h]

a International Drug Policy Consortium, "COVID-19: prisons and detention in Africa" (June 2020).

b Matthew J. Akiyama, Anne C. Spaulding and Josiah D. Rich, "Flattening the curve for incarcerated populations – Covid-19 in Jails and Prisons', *New England Journal of Medicine*, vol. 382 (2020).

c Trena I. Mukherjee and Nabila El-Bassel, "The perfect storm: COVID-19, mass incarceration and the opioid epidemic", *International Journal of Drug Policy*, vol. 83 (2020).

d UNODC, "Emergency release mechanisms for detainees and prisoners during COVID-19: findings and recommendations" (2021), forthcoming.

e Responses to the UNODC-WHO Informal Scientific Network survey, 2021.

f EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons: Results from an EMCDDA Trendspotter Study* (Luxembourg, Publications Office of the European Union, 2021).

g Barbara Sachini and others, "Early effects of COVID-19 on programs providing medications for opioid use disorders in jails and prisons", *Journal of Addiction Medicine*, vol. 14, No. 5 (September/October 2020).

h Christopher J. Donelan and others, "COVID-19 and treating incarcerated populations for opioid use disorder", *Journal of Substance Abuse Treatment*, vol. 124 (2021).

making face-to-face services still a key component of service delivery.[395]

## COVID-19 crisis has led to important adaptations and innovations in service delivery for people who use drugs

In order to overcome the limitations stemming from the COVID-19 crisis in the delivery and accessibility of services to people who use drugs, many countries have developed innovative approaches to ensure the continuation of treatment and care of people who use drugs. This includes: (a) the modification of national regulations and guidelines on drug use treatment; (b) an increase in the use of telemedicine and in the flexibility of drug treatment schemes, such as the dispensation of opioid agonist treatment medications; and (c) novel ways of providing access to needles and syringes and supplies of naloxone despite mobility restrictions and reduced social contact. The effectiveness of these approaches is still to be assessed.

### Increase in the use of telemedicine, online consultations and remote services

To ensure compliance with stay-at-home requirements and physical-distancing measures, as well as to cope with the reduced mobility of the population, many countries introduced service delivery for people with drug use disorders and for preventing the adverse health consequences of drug use through contactless (with no in-person requirements), remote services and telecommunications applications. These services include remote assessments and the prescription of controlled substances using electronic means.

In the United States, for example, federal agencies eased telemedicine restrictions, including allowing audio-only appointments for accessing drug use treatment options, early in the pandemic.[396] This allowed for an initial assessment, the prescription of medication, such as buprenorphine, and for an unobserved and unattended initiation of medication without personal interaction.[397]

To further facilitate the process, in the State of Rhode Island, for example, a telephone hotline was introduced that people with moderate to severe opioid use disorders can call to speak to a service provider without requiring an in-person evaluation or video interface.[398] In Los Angeles, facilities eased access to needle-and-syringe programmes and opioid agonist treatment for homeless opioid users.[399] Within these facilities, a "telephone booth", with a desk, a chair, a computer and a telephone was set up so as to enable safe communication with an

395 Katinka van de Ven, Alison Ritter and Robert Stirling, "The impact of the COVID-19 pandemic on the non-government alcohol and other drug sector: future implications", Drug Policy Modelling Programme Monograph, No. 34 (Sydney, Social Policy Research Centre, University of New South Wales, 2021).

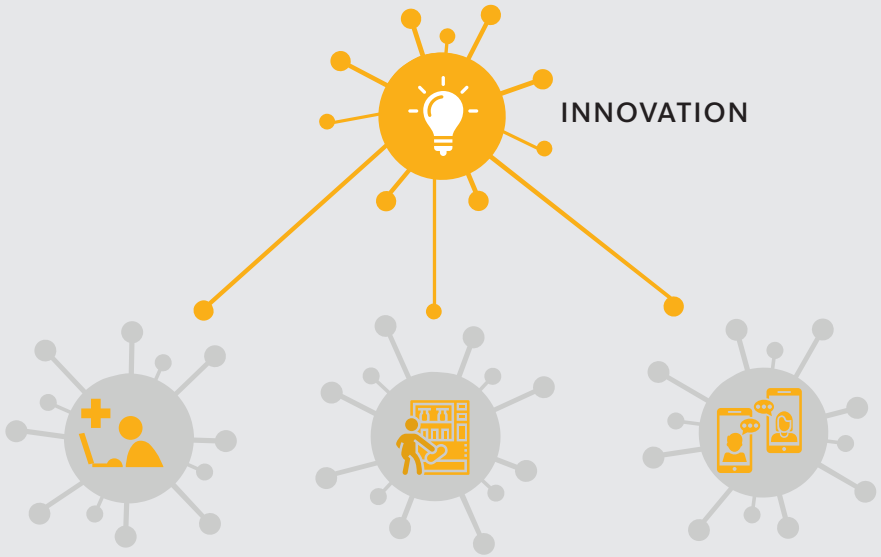
396 United States Centers for Medicare and Medicaid Services, "Medicaid for Services Delivered Via Telehealth", March 2020.

397 Elizabeth A. Samuels and others, "Innovation during COVID-19: improving addiction treatment access", *Journal of Addiction Medicine*, vol. 14, No. 4 (July/August 2020), pp. e8–e9.

398 Ibid.

399 Tringale and Subica, "COVID-19 innovations in medication for addiction treatment at a Skid Row syringe exchange".

## COVID-19 HAS TRIGGERED INNOVATION IN DRUG PREVENTION AND TREATMENT SERVICES




| Technology | Contactless services | Delivery systems |
|---|---|---|
| Audio-only assessments and prescriptions | Mail services for needles and syringes and naloxone | Mobile outreach programmes |
| Remote consultation | Mobile outreach programmes | Administration of treatment medication without face-to-face meetings |
| Service hotlines | Vending machines for sterile needle and syringes | Multi-day and multi-week take-home doses of treatment medication |
| Mobile telephone-enabled outreach programmes | Vending machines for drug treatment medications | Methamphetamine agonist treatment |
| Internet-based services and training | | |

on-site physician and counsellor or social worker during a patient's visit. This provided protection from COVID-19 to both the patient and the service provider. These innovations have not only facilitated greater access to medication for patients with opioid use disorders, but also helped determine the efficacy of yet another low-threshold care model for the provision of opioid agonist treatment to vulnerable population groups.

In Egypt, a new 24-hour hotline has been launched to connect people who use drugs with free treatment and medical services across 23 institutes in 14 provinces.[400] A total of 18,500 calls were received by the hotline during the first three months in 2020, when COVID-19-related prevention measures were enforced: calls came overwhelmingly (92 per cent) from males using cannabis, tramadol and/or heroin.

In the Near and Middle East and North Africa, organizations that provide services for people who use drugs have diversified their response through mobile outreach to hotspots and the use of technology to raise awareness about their services as well as to offer access to telemedicine and medical supplies.[401]

In West and Central Africa, an increase in the use of telecommunications in service delivery has been observed in many countries.[402] For example, in Senegal, mobile telephones have been used to monitor the conditions of people with drug use disorders. In Ghana, telemedicine and mobile services have been expanded for people seeking drug treatment services.[403] In Nigeria, a network of front-line health workers, including medical doctors, drug counsellors and allied professionals, have set up an online consultation and treatment platform for people with drug use disorders and their families.[404] However, concern has also been expressed by an expert from Nigeria that some socially disadvantaged groups have been unable to access telehealth services because of limited or a lack of Internet access or sufficient telephone credit for accessing such services.[405] Also in Nigeria, experts reported that some centres that were providing in-person services for people who use drugs, and also a wider range of medical services such as treatment for malaria, were severely affected by the pandemic and have almost ceased to operate.[406]

In Europe, telemedicine has been widely introduced as an alternative to face-to-face services. This option has been found to be particularly beneficial for the following: (a) people with less severe forms of drug use disorders; (b) treatment that primarily involves psychological counselling (e.g., for cannabis or cocaine users); (c) first-time contact with a service provider; and (d) clients in long-term opioid agonist maintenance treatment. Telephone helplines and online professional forums have provided alternatives for people who use drugs to seek support during the pandemic.[407, 408]

In the European Union, the adoption of telemedicine to deliver treatment services proved to be beneficial in reaching out to new clients by extending service coverage, especially to remote areas where physical services were limited. However, a number of challenges were highlighted, including the difficulties in using telemedicine encountered by some client groups, such as older people who use drugs, clients referred by the criminal justice system and clients with severe mental health issues and complex comorbidities. Problems were also identified with the use of technology in the context of group or family therapy, as were difficulties in carrying out clinical pre-assessments for new treatment demands by video. Some of these challenges resulted in a yet unknown number of clients having to interrupt treatment.[409]

An increase in the use of telemedicine during the COVID-19 pandemic has also been facilitated by the broadening of insurance coverage. After the Department of Health and Human Services of the United States declared a national public health emergency on 27 January 2020, the

400 Response submitted by Egypt in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

401 M. C. van Hout, P. Haddad and E. Aaraj, "COVID-19 and the impact on drug use and harm reduction programming in the Middle East and North Africa (MENA) region: a regional consultation of stakeholders and people who use drugs", *International Journal of Mental Health and Addiction*.

402 Research conducted by the UNODC Regional Office for West and Central Africa.

403 Responses to the UNODC-WHO Informal Scientific Network survey, 2021

404 UNODC, "UNODC launches DrugHelpNet in Nigeria to provide over-the-phone assistance to drug users in need", 14 April 2020.

405 Responses to the UNODC-WHO Informal Scientific Network survey, 2021.

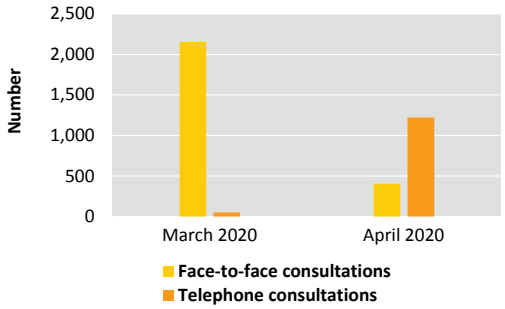
406 Ibid.

407 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

408 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe".

409 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

FIG. 36 **Face-to-face and telephone consultations, Riga Addiction Medicine Centre, Latvia, March and April 2020**




Source: Source: EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe, EMCDDA Trendspotter briefing (May 2020).

range of medical services provided under the federal health insurance programme, Medicare, was extended to cover telemedicine. The services provided under telemedicine also included opioid agonist treatment,[410] and this made it possible to reach communities that had previously encountered barriers to accessing substance use disorder services. Some states, such as Delaware, Florida, Indiana, Michigan, Ohio and West Virginia, had enacted laws before the pandemic to enable the prescription of controlled substances by means of telemedicine, without any prior in-person medical examination, under certain specific requirements.[411] In the city of Hamburg, Germany, a temporary opioid agonist treatment service was introduced, where everyone could access treatment and medication, regardless of health insurance status.[412]

Innovations and the increased use of technology have been developed to help not only people who use drugs but also those who provide treatment services. In India, for example, doctors who provide opioid agonist treatment have been provided with training over a new online platform, and freely accessible Internet-based educational materials have been developed to help health professionals address opioid use disorder treatment.[413] In Brazil, two initiatives were launched to provide teleconsultations for both health professionals and for people who may face aggravated problems related to drug use as a result of the pandemic. These interventions offered support for managing stress, anxiety, depression and irritability.[414] In Eastern Europe and Central Asia, online outreach packages have been developed using Internet technologies for State-run and non-governmental organization service providers, including community-based organizations, with the aim of increasing the availability and accessibility of services for preventing HIV and viral hepatitis among people who use drugs.[415]

## Innovations in contactless distribution of medication and supplies

Some of the services for people who use drugs have set up new, contactless delivery systems that distribute sterile needle and syringes and medication to people who use drugs while adhering to physical-distancing measures.

For example, in European Union member States, some needle and syringe programmes have encouraged users to take larger quantities of clean needle and syringes and other equipment than previously allowed.[416] In the United States, the use of "peer-based delivery models", which provide clients with sufficient supplies to distribute them to other people who inject drugs who may be unwilling or unable to visit the distribution centre, have been promoted in order to ensure that sterile supplies reach the people who need them most.[417]

Self-service programmes have been introduced in Ukraine, where needle- and syringe-vending machines have been introduced to ensure access to clean injecting equipment without personal contact.[418] This is also the case in

410 United States, Center for Connected Health Policy, "COVID-19 telehealth coverage policies" (March 2021).

411 United States, Department of Health and Human Services, "Rural health care and Medicaid telehealth flexibilities, and guidance regarding section 1009 of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act (Pub. L. 115-271), entitled 'Medicaid Substance Use Disorder Treatment via Telehealth'", *CMCS Informational Bulletin* (April 2020).

412 Harm Reduction International, *Global State of Harm Reduction 2020*.

413 Arpit Parmar, Kumari Rina and Susanta Kumar Padhy, "COVID-19 pandemic and people who use opioids in India: opportunities and evolutions", *Indian Journal of Psychological Medicine*, vol. 42, No. 6 (November 2020).

414 Response submitted by Brazil in response to the UNODC global call for contributions on the impact of the COVID-19 pandemic.

415 Information provided by UNODC, Regional Office for Eastern Europe and Central Asia.

416 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe".

417 United States, Centers for Disease Control and Prevention, "Interim guidance for syringe services programs", 15 May 2020.

418 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

Canada, where public funding has been made available for vending machines that dispense medical-grade opioids in British Columbia, Ontario and Nova Scotia.[419]

Some services have increasingly used postal systems to deliver sterile needles and syringes, other materials and opioid agonist treatment medication to users at home. This has been reported by countries in Eastern and South-Eastern Europe, where postal services have been used to provide an uninterrupted supply of antiretroviral medications for the treatment of HIV/AIDS among people who use drugs.[420] In Ireland, opioid agonist medications have also been delivered to clients' homes and photographs taken with a mobile telephone to verify the identity of the recipient and avoid the need for signatures.[421] In France,[422] initiatives have been started to mail supplies such as sterile needles and syringes for safer drug use to people in need. In the United States, a similar programme, promoted on social media, has provided naloxone through postal services.[423]

## Expanded model of take-home opioid agonist therapy medication

Prior to the COVID-19 pandemic, the conventional method for obtaining opioid agonist treatment was direct dispensation. This required patients to attend facilities on a near-daily basis and often to take the medication (buprenorphine or methadone) on site, in the presence of staff. This was aimed at encouraging engagement with patients and to foster a therapeutic relationship as well as prevent the diversion of and gaps in medication, and thus relapse, overdose or death.[424] The implementation of COVID-19-related restrictions triggered the introduction of policy changes that have facilitated access to opioid agonist medication while reducing physical contact between people with drug use disorders and health-care staff.

In the United States, for example, people with opioid use disorders can now initiate treatment with buprenorphine without an initial in-person doctor visit, which used to be the rule. Methadone treatment previously required daily supervised dosing with tightly controlled take-home options, but patients considered stable may now take home doses for up to 28 days, while others may receive doses for up to 14 days.[425]

These policy changes have also been seen in countries in other regions. In Colombia, for example, measures that allow take-home opioid agonist medication for longer periods have been approved,[426] while according to experts in Ghana, patients have been allowed a double filling of prescriptions for drug treatment medication.[427] In India, take-home doses of buprenorphine and methadone have been approved and successfully implemented as an emergency measure in some treatment centres and states; the permitted take-home dose of buprenorphine in India is 7–14 days.[428, 429] As a result of their success, these measures may be sustained beyond lockdown periods and thereby offer greater flexibility to people who are enrolled in opioid agonist treatment programmes.[430, 431]

In Taiwan Province of China, 123 hospital-affiliated drug treatment centres have been established to increase access to opioid agonist treatment.[432] In addition, an outreach service station programme has been launched and 38 satellite drug treatment centres have been established to increase access to opioid agonist treatment in suburban and rural areas.

In European Union Member States, many countries have relaxed the regulations or legal framework governing take-home opioid agonist medication for stable patients.

419 Canada, Health Canada, "Government of Canada to make an announcement in support of the MySafe Society safer supply project in Canada", 1 March 2021.

420 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

421 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe".

422 Ibid.

423 Rachel French, Jamie Favaro and Shoshana V. Aronowitz, "A free mailed naloxone program in Philadelphia amidst the COVID-19 pandemic", *International Journal of Drug Policy*, vol. 94 (2021).

424 Tringale and Subica, "COVID-19 innovations in medication for addiction treatment at a Skid Row syringe exchange".

425 Volkow, "Addressing the unique challenges of COVID-19 for people in recovery".

426 Harm Reduction International, *The Global State of Harm Reduction 2020*.

427 Responses to the UNODC-WHO Informal Scientific Network survey, 2021

428 Parmar, Rina and Padhy, "COVID-19 pandemic and people who use opioids in India".

429 India, Ministry of Health and Family Welfare, "Guidance note for persons engaged in HIV/AIDS response under National AIDS Control Programme in view of the COVID-19 scenario" (March 2020).

430 Harm Reduction International, *The Global State of Harm Reduction 2020*.

431 Dunlop and others, "Challenges in maintaining treatment services for people who use drugs during the Covid-19 pandemic".

432 Cheng-Chan Shih and others. "Strategies to maintain persistence of opioid agonist therapy during the novel coronavirus pandemic in Taiwan", *Drug and Alcohol Dependence*, vol. 217 (2020).

These changes include extended prescriptions, with an increase in the quantities of opioid agonist medication prescribed, electronic prescriptions being sent directly to pharmacies and a reduction in or exemption from urine testing and supervised intake of medication.[433]

Similarly, in order to ensure that the most vulnerable clients have access to opioid agonist medication, outreach has been deployed through mobile programmes in a number of countries, such as Czechia, Slovenia, Spain and Portugal.[434] However, some European Union countries have raised concerns about the diversion and misuse of such medication.[435]

In Armenia, Georgia, the Republic of Moldova and Ukraine, within a week of the implementation of the initial COVID-19 restrictions, actions were taken to either scale up the distribution of take-home opioid agonist medication or implement take-home provisions in places where they did not already exist; the take-home doses ranged from a 5- to a 10-day supply. In Ukraine, more than 95 per cent of opioid agonist treatment clients (almost 13,000 people) were receiving up to a 10-day supply of take-home medication by the end of March 2020. This was complemented by psychosocial support provided by means of online applications or telephone.[436]

In Czechia, stimulant agonist treatment involving the prescription of methylphenidate was introduced to help reduce methamphetamine-related cravings.[437] By the end of 2020, this treatment option was being provided to clients in four treatment centres in the country.[438]

Many of these innovations seem to have facilitated an improvement in access to medication, especially for those patients with opioid use disorders. There are examples where community-led organizations have facilitated the implementation of these new approaches. Many of these innovations have not been yet evaluated for their efficacy, and it is too premature to establish if they improve the provision of drug services, such as opioid agonist treatment, in particular to vulnerable population groups.

433 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe".

434 Ibid.

435 EMCDDA, *Impact of* COVID-19 *on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

436 EMCDDA, "Impact of COVID-19 on drug markets, drug use, drug-related harms and responses in east European Neighbourhood Policy countries".

437 EMCDDA, "Impact of COVID-19 on drug services and help-seeking in Europe".

438 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

# OUTLOOK





## The long-term potential of drug market changes triggered by the COVID-19 pandemic

As shown in the previous chapters of this booklet, the changes observed in drug markets, in particular during the first months of the pandemic, appear to have been largely temporary. The drug markets recovered quickly after mobility restrictions were lifted, highlighting their resilience. The immediate direct effects of the COVID-19 pandemic itself are therefore not likely to fundamentally change the scope and dynamics of existing drug markets in the long run because drug market participants adapt and consumers may return to their previous habits once the pandemic is under control and social activities resume.

Nevertheless, there are other indirect factors triggered by the pandemic that may influence drug markets and people who use drugs in the long run. This is because changes in illicit drug markets are closely linked to wider social and economic developments. Research findings associate inequality, poverty and lack of opportunities for socioeconomic development with increased drug use disorders and increased engagement in drug production and trafficking.[439, 440] Moreover, historically, economic recessions have led to cuts in drug-related budgets and reductions in the resources allocated by Governments to drug programmes,[441] a development that could follow the global recession brought on by the COVID-19 pandemic. All of these pandemic-related social and economic consequences have the potential to affect people who produce, traffic and use drugs for years to come.

Other phenomena to reckon with are the increased use of maritime and waterway routes for trafficking and increases in the size of drugs shipments seized. If the pandemic has strengthened or led to the development of new criminal networks that can infiltrate the legal cargo shipment system, those patterns may persist even after the pandemic is under control.

Also of note is how the pandemic has further accelerated the trend in the increasing non-medical use of pharmaceutical drugs, and may have triggered a dynamic that has increased the size of that market. In the past, in North America, a high prescription rate for pharmaceutical opioids has resulted in their diversion and an overall increase in the non-medical use of pharmaceutical opioids, and subsequently to an opioid crisis and a surge in overdose deaths.[442] Overdose deaths have increased even further during the COVID-19 pandemic,[443] a trend that may continue if not counteracted.

Moreover, while increasing rates of cannabis use were observed in many countries before the pandemic,[444] some cannabis markets have grown strongly during the pandemic – and likely because of it – as a result of stay-at-home orders and social distancing restrictions, potentially accelerating the pre-existing trends of cannabis users consuming cannabis more frequently[445] and the exposure of a new segment of the population to the drug.[446]

The increased use of digital technology in drug distribution triggered by the pandemic – increased mail delivery and contactless methods for reaching buyers, including web-based purchases over the clear web and the dark web – has shown how dynamic retail distribution can adapt to changing circumstances, just as it did in the legal

439 UNODC, *World Drug Report 2020*, booklet 5, *Socioeconomic Characteristics and Drug Use Disorders* (United Nations publication, 2020).

440 Jeremy Arkes, "Recessions and the participation of youth in the selling and use of illicit drugs", *International Journal of Drug Policy*, vol. 22, No. 5 (September 2011), pp. 335–340.

441 Claudia Costa Storti, Paul De Grawe and Peter Reuter, "Economic recession, drug use and public health", *International Journal of Drug Policy,* vol. 22, No. 5 (September 2011), pp. 321–325.

442 UNODC, *World Drug Report 2020*, booklet 4, *Cross-Cutting Issues: Evolving Trends and New Challenges* (United Nations publication, 2020).

443 See booklet 2, *Global Overview of Drug demand and Drug Supply*, of the present report.

444 UNODC, *World Drug Report 2020*, booklet 2, *Drug Use and Health Consequences* (United Nations publication, 2020).

445 Ibid.

446 Andrew H. Rogers and others, "Psychological factors associated with substance use initiation during the COVID-19 pandemic", *Psychiatry Research*, vol. 293 (2020).

trade. If such innovations provide a comparative advantage beyond the COVID-19 pandemic, they are likely to continue to be used. This has the potential to make the reach of retail drug markets more global and, for some people who traffic drugs, to reduce the barriers to entry into drug distribution.

Many of the innovations in the provision of services to people who use drugs that were triggered by COVID-19-related measures have the potential to be long-lasting and to contribute to the improvement of drug treatment and care systems. Early studies on the effectiveness of such services have shown promising results, for example, in the case of remote consultations (e.g., telemedicine), contactless outreach programmes and the provision of sterile drug use equipment through, for example, e-mail services and vending machines.[447] Experiences of using a more flexible dispensation of opioid agonist medications are being closely monitored,[448] and there is potential for an increase in the coverage of services, if that flexibility is continued after social-distancing measures are lifted. While more research is needed to assess the effectiveness of treatment methods that are based on new technology, the new approaches based on contactless delivery have the potential to increase accessibility to drug treatment services if provisions for guaranteeing informed consent, confidentiality, privacy and safety are met.

It is difficult to predict which of the dynamics that have emerged in drug markets during the pandemic will have a lasting impact. The world has not seen a pandemic on this scale since the influenza pandemic of 1918, which took place at a time when the illegal markets for drugs such as heroin and cocaine were in their infancy and therefore insignificant by today's standards, thus providing little direct comparison with the impact of COVID-19 on drug markets. More recent shocks in drug markets, such as the Australian heroin drought of 2001 might have yielded insights into changing drug market dynamics had they not been localized and temporary in nature, which means that they are of limited relevance to the current situation.

The present section describes what the future may hold for drug markets in a world that has been affected by a once-in-a-lifetime pandemic. Neither exhaustive nor conclusive, the narrative is guided by early indications collected during the first year of the pandemic and the resulting inference from existing evidence on drug market dynamics, such as the links between socioeconomic development and drug production, trafficking and use, or the dynamics behind the ongoing opioid crisis.

A big unknown about the transformative power that the COVID-19 pandemic may have on drug markets is how quickly COVID-19-related restrictions can be fully lifted and how quickly both the global and local economies can recover from the COVID-19-related shocks.

## A lasting economic crisis may lead to increased participation in illicit drug cultivation, production and trafficking and may aggravate vulnerability to drug use disorders

The cultivation of plant-based drugs and the production of coca leaf and opium are driven by a multitude of factors, with socioeconomic factors such as lack of livelihood opportunities, lack of access to licit employment or education and the absence of basic facilities required for sustainable development (such as clean water and health care) being some of the main drivers.[449] Likewise, while increasing wealth has been linked to rising drug use, the poorest suffer the largest burden of drug use disorders.[450] Moreover, changes in labour markets, such as rising unemployment, have been linked to increases in drug use in some segments of the population.

The severe economic crises following the implementation of COVID-19-related measures may therefore aggravate some drivers of illicit drug cultivation and may hit vulnerable populations and people who use drugs the hardest. This could lead to increased participation in drug cultivation and trafficking, increased risk of initiating drug

447 See previous chapter on the impact of COVID-19 on drug service provision, in the present report.

448 Ibid.

449 UNODC, *World Drug Report 2020*, booklet 6, *Other Drug Policy Issues* (United Nations publication, 2020).

450 Ibid.

use among vulnerable people, and worse health outcomes in people who use drugs in certain populations.[451, 452, 453, 454, 455, 456, 457, 458, 459]

The global economy is estimated to have contracted by 3.3 per cent in 2020, and is projected to grow by 6.0 per cent in 2021 and 4.4 per cent in 2022. In contrast to earlier projections, the COVID-19-related recession is therefore likely to be smaller than the global financial crisis of 2008.[460] However, the negative impact is expected to be greater in emerging market economies and low-income countries, which are expected to recover more slowly and with more significant medium-term losses than advanced economies.[461]

Across all economies, income inequality is likely to increase significantly because of the pandemic. Youth, women, workers with relatively lower educational attainment and the informally employed have generally been hit the hardest by the COVID-19-related recession.[462] COVID-19 has had an unprecedented impact on extreme poverty globally. For the first time in 20 years, global poverty is on the increase, and the pandemic is estimated to have pushed between 119 million and 124 million people into extreme poverty in 2020.[463]

An increase in the rate of domestic violence against children, in particular violence linked to the closing of schools and/or the loss of income,[464] is likely to increase vulnerabilities among children that could lead to an increase in drug use disorders in the future. That is because adverse childhood experiences are associated with an increased prevalence of substance use disorders, especially amongst more socioeconomically disadvantaged groups.[465, 466]

In terms of education, learning losses have been more severe in low-income and developing countries, where it has been found to be harder to cope with school closures, especially for girls and students from low-income households. During the peak of the pandemic, in countries with school closures, the estimated short-term out-of-school rate in primary education was 20 per cent in countries with a high level of human development, compared with 86 per cent in those with a low level of human development.[467]

All these developments may exacerbate the socioeconomic situation of vulnerable populations, which can accelerate drug use initiation and the progression from drug use to drug use disorders and can also affect those vulnerable to participation in drug cultivation and trafficking. Depending on the severity of the impact and on the duration of economic recovery, this may aggravate the drug problem in affected countries and regions.

The COVID-19 pandemic has also increased vulnerabilities linked to mental health conditions in general,[468] a trend that can influence drug use. The complex association

451 Ibid.

452 Jan-Willem Bruggink and others, "Changes between pre-crisis and crisis period in socioeconomic inequalities in health and stimulant use in Netherlands", *European Journal of Public Health*, vol. 26, No. 5 (October 2016), pp. 772–777.

453 Nicolau Martin Bassols and Judit Vall Castelló, "Effects of the great recession on drugs consumption in Spain", *Economics and Human Biology*, vol. 22 (2016), pp. 103–116.

454 Christopher S. Carpenter, Chandler B. McClellan and Daniel I. Rees, "Economic conditions, illicit drug use, and substance use disorders in the United States", *Journal of Health Economics*, vol. 52 (2017), pp. 63–73.

455 Christian Ben Lakhdar and Tanja Bastianic, "Economic constraint and modes of consumption of addictive goods", *International Journal of Drug Policy*, vol. 22, No. 5 (September 2011), pp. 360–365.

456 Alison Ritter and Jennifer Chalmers, "The relationship between economic conditions and substance use and harm", *Drug and Alcohol Review*, vol. 30, No. 1 (January 2011), pp. 1–3.

457 Raimondo Maria Pavarin and others, "Mortality risk among cocaine users before and after the economic recession: results of a longitudinal study", *European Addiction Research*, vol. 26, No. 1 (January 2020), pp. 10–19.

458 Anne Line Bretteville-Jensen, "Illegal drug use and the economic recession: what can we learn from the existing research?", *International Journal of Drug Policy*, vol. 22, No. 5 (September 2011), pp. 353–359.

459 Geert Dom and others, "The impact of the 2008 economic crisis on substance use patterns in the countries of the European Union", *International Journal of Environmental Research and Public Health*, vol. 13, No. 1 (January 2016).

460 International Monetary Fund, *World Economic Outlook: Managing Divergent Recoveries* (Washington D.C., 2021).

461 Ibid.

462 Ibid.

463 Committee for the Coordination of Statistical Activities, *How COVID-19 is Changing the World: A Statistical Perspective*, vol. III (New York, 2021).

464 Save the Children International, "Protect a generation: the impact of COVID-19 on children's lives" (London, 2020).

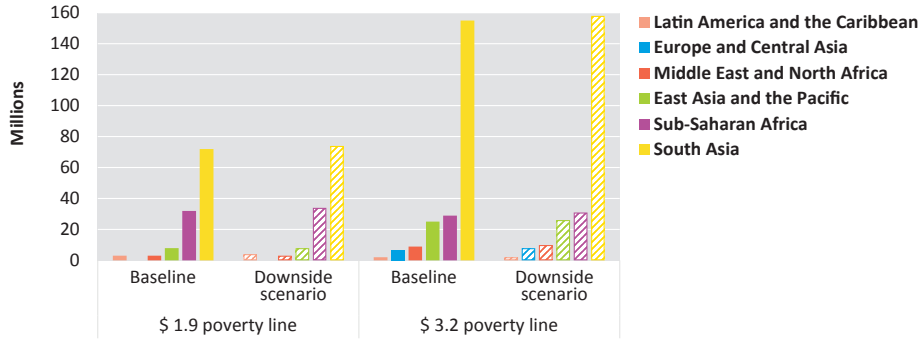
465 Mark A. Bellis and others, *Adverse Childhood Experiences and Their Impact on Health-Harming Behaviours in the Welsh Adult Population: Alcohol Use, Drug Use, Violence, Sexual Behaviour, Incarceration, Smoking and Poor Diet* (Cardiff, Wales, United Kingdom, Public Health Wales NHS Trust, 2015).

466 Elizabeth A. Evans, Christine E. Grella and Dawn M. Upchurch, "Gender differences in the effects of childhood adversity on alcohol, drug, and polysubstance-related disorders", *Social Psychiatry and Psychiatric Epidemiology*, vol. 52, No. 7 (July 2017), pp. 901–912.

467 Committee for the Coordination of Statistical Activities, *How COVID-19 is Changing the World: A Statistical Perspective*, vol. III (New York, 2021).

468 Tianchen Wu and others, "Prevalence of mental health problems during the COVID-19 pandemic: A systematic review and meta-analysis", *Journal of Affective Disorders, vol. 281 (2021) pp. 91–98.*

FIG. 37 Regional distribution of numbers of people living in extreme poverty induced by the COVID-19 pandemic




Source: Committee for the Coordination of Statistical Activities, *How COVID-19 is Changing the World: A Statistical Perspective*, vol. III (New York, 2021) and Lakner, Christoph, Daniel Gerszon Mahler, Mario Negre, and Espen Beer Prydz, "How Much Does Reducing Inequality Matter for Global Poverty?" (2020).

*Note: This chart shows projected numbers of new poor due to COVID-19 at different poverty lines, using various economic growth projections that were available in 2020.*

between mental health conditions and drug use disorders has been well documented, highlighting the fact that mental health and drug use disorders share many vulnerabilities, in particular those linked to neurodevelopment, as well as the fact that mental health disorders can be a vulnerability factor for drug use disorders and vice versa.[469] The precise impact of the pandemic on mental health will probably become clear only in the months to come, but there is the potential in the medium and long term for the pandemic to exacerbate drug use and drug use disorders via the multiple pathways linked to mental health conditions, resulting in an increase in the numbers of people with co-occurring mental health and drug use disorders.

## COVID-19 pandemic may lead to increases in illicit crop cultivation as a means of overcoming economic hardship in vulnerable households and regions

The severe economic contraction and instability associated with the COVID-19 crisis may push more rural households into the illicit cultivation of opium poppy or coca bush in the future to compensate for the economic losses incurred.

Afghanistan,[470] one of the world's least developed countries and the largest contributor to global opium production, has been heavily affected by the economic downturn related to the pandemic. The pandemic came on top of a string of years of unusual weather, including a widespread drought in 2018 and high seasonal floods in 2019, which had already resulted in high levels of hunger and malnutrition and escalating household debt.[471] Following the onset of the pandemic in Afghanistan in mid-March 2020, almost all main food commodity prices showed an increase by September of that year, which affected the purchasing power of low-income households: the purchasing power of casual laborers and pastoralists deteriorated by 6 per cent and 8 per cent, respectively, mainly due to increased wheat prices.[472]

Such commodity price increases are likely to be felt most keenly by vulnerable populations, including people already dependent on humanitarian assistance. Depending on the duration of the economic recession, the speed of recovery and the degree to which the rural population is

469 United States, National Institute on Drug Abuse, "Common comorbidities with substance use disorders", Research Report (April 2020).

470 UNODC and Afghanistan, *Afghanistan Opium Survey 2019: Socioeconomic Survey Report 2019–Drivers, Causes and Consequences of Opium Poppy Cultivation* (February 2021).

471 Food Security Information Network and Global Network against Food Crises, *2020 Global Report on Food Crises: Joint Analysis for Better Decisions* (Rome, 2020).

472 World Food Program, "Afghanistan: Countrywide Weekly Market Price Bulletin", No. 16 (covering second week of September 2020) (September 2020).

affected, loss of livelihood may overwhelm people's currently precarious coping mechanisms,[473] as all these developments are likely to further reduce licit economic opportunities and increase the propensity of the rural population of Afghanistan to engage in illegal activity, such as opium or cannabis cultivation and heroin or methamphetamine manufacture.

In Mexico, where there was roughly a 9 per cent contraction in the economy in 2020,[474] the economic downturn could result in fewer resources being available for robust public investment in alternative livelihoods, which could enable criminal groups to capitalize on the situation and increase their affiliation.[475]

Coca bush cultivation and cocaine manufacture appear to be unaffected by the impact of the COVID-19 pandemic; however, this may change as the economic recession, which is of historic proportions in Latin America,[476] could push more farmers into the illicit cultivation of coca bush. Moreover, there are early indications that organized crime groups may be taking over some State functions in certain areas,[477] and of an increased participation of some vulnerable population groups in the illegal drug markets. For example, children who are not in school due to lockdown measures have been taking up coca leaf collection to earn additional money.[478] With the economic situation of vulnerable groups being particularly precarious, such developments may intensify and lead to increased cultivation and manufacture of cocaine.

Although research on the topic is still limited, reduced licit economic opportunities may lead to increased participation in crime, including drug trafficking.[479, 480]

473 Food and Agricultural Organization of the United Nations, "Addressing the impacts of COVID-19 in food crises (April–December 2020): FAO's component of the Global COVID-19 Humanitarian Response Plan" (Rome, 2020).

474 International Monetary Fund, "Mexico". Available at www.imf.org/en/Countries/MEX.

475 Vanda Felbab-Brown, "Poppy, eradication, and alternative livelihoods in Mexico ", Brookings, 18 August 2020.

476 United Nations, Department of Economic and Social Affairs, "Global economic recovery remains precarious: the projected rebound of 4.7 per cent will barely offset 2020 losses", *World Economic Situation and Prospects*, Briefing, No. 146 (February 2021).

477 UNODC, "The impact of COVID-19 on organized crime".

478 UNODC field office assessment based on the collection of qualitative and quantitative information.

479 Jeremy Arkes, "Recessions and the participation of youth in the selling and use of illicit drugs", *International Journal of Drug Policy*, vol. 22, No. 5 (September 2011), pp. 335–340.

480 Jeremy Arkes, "Does the economy affect teenage substance use?", *Health Economics*, vol. 16, No. 1 (January 2007), pp. 19–36.

Research in Latin America has shown that low levels of education and high rates of unemployment put young people at increased risk of delinquent and violent behaviour, joining organized crime structures and becoming involved in collective violence.[481] Moreover, research in the United States found that illicit activities such as drug trafficking can provide an opportunity for economic advancement and for establishing a power base for individuals who have been lacking access to licit employment opportunities;[482] COVID-19-related unemployment may aggravate the situation of many.

One common characteristic of farmers involved in illicit crop cultivation is that they are frequently smallholders located in remote and conflictive rural areas where the rule of law is weak. In this regard, it is a misconception that illicit crop cultivation earns significant profit for most of such farmers, who occupy the least profitable stage of the illicit value chain.[483] Annual surveys of rural communities in Afghanistan and Myanmar have shown that villages affected by illicit opium cultivation have lower levels in several of the multidimensional criteria for sustainable development than have villages not affected by such cultivation.[484] Also, in Colombia, data collected from the field[485] showed a similar "development gap" between households participating in illicit crop cultivation and those that are not.[486]

481 Research specifically assessing the role of unemployment in youth violence has found that an increase in the proportion of young people without an occupation (i.e., not in employment, education or training) is linked to an increase in the level of homicide, particularly in certain circumstances such as the presence of street gangs and organized crime groups that draw many of their recruits from this cohort (Rafael de Hoyos, Carlos Gutiérrez and Vicente Vargas, "The harmful interaction between economic crisis, violence and Ninis in Mexico" (World Bank, Washington, D.C., 2015); and Rafael de Hoyos, Halsey Rogers and Miguel Székely, *Out of School and Out of Work: Risks and Opportunities for Latin America's Ninis* (World Bank, Washington, D.C., 2016)).

482 Tony Larry Whitehead, James Peterson and Linda Kaljee, "The "hustle": socioeconomic deprivation, urban drug trafficking, and low-income, African-American male gender identity", *Pediatrics*, vol. 93, No. 6 (June 1994), pp. 1050–1054.

483 Building on uncertainty, the impact of COVID-19 on small farmers, alternative development and the illicit economy, unpublished report for the Global Partnership on Drug Policies and Development.

484 For example, UNODC annual socioeconomic reports on Afghanistan and Myanmar.

485 UNODC calculations using data from 6,000 households representing the baseline for evaluation of the alternative development project entitled "Land titling to substitute illicit crops" ("Formalizar para sustituir") in 2017. The baseline data reflect the situation before the beginning of the project.

486 UNODC, *World Drug Report 2020*, booklet 6, *Other Drug Policy Issues.*

The COVID-19 pandemic has brought additional challenges to all farming households, not least those involved in illicit crop cultivation. The ways that the pandemic has affected illicit cultivation differ, however: on the one hand, low licit crop prices, the return of family members to rural communities due to unemployment elsewhere, and the suspension of eradication may have prompted increases in illicit crop cultivation in countries such as the Plurinational State of Bolivia; on the other hand, in countries such as Peru and Myanmar, temporary or long-term decreases in illicit crop prices may have made illicit cultivation less attractive.[487] Nevertheless, the abiding trend in illicit crop cultivation will depend on the fine balance between several associated factors, which may differ by location. For instance, farmers may continue to favour illicit crops if, despite a decline in the prices of both licit and illicit crops, illicit crop prices remain slightly higher than prices of licit crops, or if farmers expect that illicit crop prices will, in the near future, recover faster than licit crop prices.

Despite potential regional differences, the COVID-19 pandemic has added another layer of vulnerability to already fragile and often isolated communities affected by illicit crop cultivation and has exacerbated inequality and underdevelopment. Due to their remoteness, many such communities had lacked licit income-generating alternatives even before the pandemic. Consequently, in several regions, a slight recovery in illicit crop prices may lead to a significant increase in illicit crop cultivation if profitable licit income-generating alternatives are not in place.

## Despite resources for alternative development programmes being more necessary than ever, they are at risk

Alternative development programmes are designed to provide licit income-generating alternatives to farmers in communities affected by illicit crop cultivation and provide a long-term development response to illicit drug cultivation.[488] Faced with the additional challenges stemming from the pandemic, farmers could be supported by these programmes to help overcome the economic shocks, and the risk of more households engaging in illicit cultivation could be mitigated. Yet despite the many additional benefits that alternative development can provide in terms of food security, social capital and the creation of a culture of legality,[489] such programmes have faced additional challenges during the pandemic. The alternative crops and livelihoods that alternative development programmes support may suffer due to market disruptions, and while local markets may have temporarily become more important during the COVID-19 pandemic, there is no guarantee that such local markets will boost the commercialization of alternative development products in the long term.[490]

In low-income countries, such as Afghanistan and Myanmar, alternative development programmes rely on international donors[491] and risk being underfunded because donor funding is largely being diverted to the response to the COVID-19 pandemic.[492] Other countries that have invested in national alternative development programmes may also divert funding from such programmes to responding to the COVID-19 pandemic. If this happens, the resulting lack of support may drive more farmers who were beneficiaries of alternative development programmes but still in the process of ceasing illicit crop cultivation to resume that illicit cultivation.

## A protracted economic crisis may accelerate the progression of people who use drugs to drug use disorders

Economic constraints caused by the global COVID-19 crisis, if they persist, may exacerbate the risk of the most vulnerable population groups initiating drug use and accelerate the progression of people who use drugs to drug use disorders because such progression is influenced by socioeconomic characteristics at the individual, community and country levels. Economic recessions and consequent increases in the level of unemployment have been found to be associated with increases in the level of drug use disorders via psychosocial stress pathways.[493] Socioeconomic characteristics can influence drug use and

487 Building on uncertainty, the impact of COVID-19 on small farmers, alternative development and the illicit economy, unpublished report for the Global Partnership on Drug Policies and Development.

488 UNODC, *World Drug Report 2015* (United Nations publication, 2015).

489 Building on uncertainty, the impact of COVID-19 on small farmers, alternative development and the illicit economy, unpublished report for the Global Partnership on Drug Policies and Development.

490 Ibid.

491 UNODC, *World Drug Report 2015*.

492 Building on uncertainty, the impact of COVID-19 on small farmers, alternative development and the illicit economy, unpublished report for the Global Partnership on Drug Policies and Development.

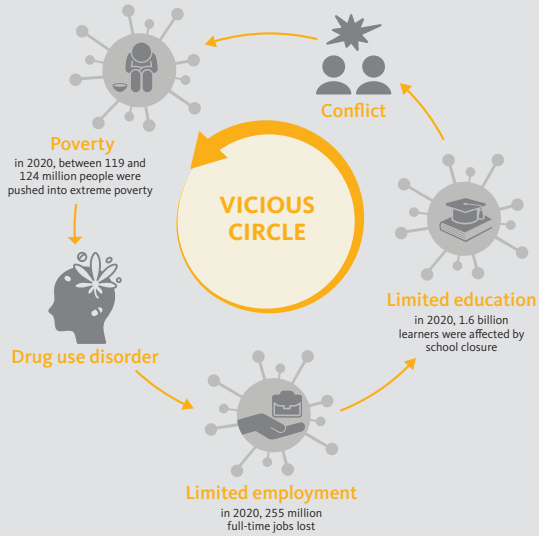
493 Gera E. Nagelhout and others, "How economic recessions and unemployment affect illegal drug use: a systematic realist literature review", *International Journal on Drug Policy*, vol. 44 (2017), pp. 69–83.

drug use disorder patterns also by means of intermediate mechanisms: for example, income inequality at the neighbourhood level can be related to levels of opioid overdose via the geographical distribution of health-care facilities.[494] In addition, characteristics at the individual, family, community and country levels can interact, making certain groups especially vulnerable to the consequences of socioeconomic inequalities.

Recent research in high-income countries has examined the consequences of the worldwide economic recession in 2008 on substance use in general, showing inconclusive results for the use of substances and drug- and alcohol-use disorders. A systematic review, which drew attention to the limited number of high-quality studies on this topic, reported a decrease in Italy in the use of drugs that had a higher cost (i.e., heroin and cocaine) and an increase in the use of drugs that had a lower cost (i.e., cannabis and methamphetamine), possibly reflecting decreases in individual income levels. By contrast, other countries such as Greece and Spain saw an increase in the use of drugs, in particular among older people and people who had become unemployed.[495] Increased unemployment appears to be a key explanation for the increased levels of drug use during periods of economic downturn, resulting from the associated psychosocial distress.[496] Interestingly, when asked about their reasons for increasing their level of drug use during a period of economic recession, people who had used drugs in Catalonia, Spain, in England, United Kingdom, and in Poland mainly attributed their behaviour to having more free time on their hands,[497] although that finding is not supported by a systematic review of the topic.[498]

In a broader context, changes in labour market characteristics, such as increases in the unemployment rate, have been linked to increases in drug use and drug use disorders in a relatively consistent way. In an analysis of data collected in the United States from almost 9,000 adolescents who participated in a longitudinal study, it was found that exposure to elevated unemployment rates at the regional level during the participants' childhood were associated with increased risk in engaging in cannabis use: an increase of 1 per cent in the unemployment rate predicted an increase in cannabis use by a factor of 1.09.[499] Another study, using administrative statistics for the period 2005–2010 collected in 366 metropolitan areas in the United States, showed a 0.23 per cent increase in deaths caused by drug overdoses for each point increase in the unemployment rate. This effect appeared strongest among individuals aged 25–64, with the intention of committing suicide perhaps explaining a fraction of those overdose deaths.[500]

**THE COVID-19 PANDEMIC HAS EXACERBATED THE FACTORS THAT FUEL THE VICIOUS CYCLE OF SOCIO-ECONOMIC VULNERABILITY AND DRUG USE DISORDERS**




494 Christopher Rowe and others, "Neighborhood-level and spatial characteristics associated with lay naloxone reversal events and opioid overdose deaths", *Journal of Urban Health*, vol. 93, No. 1 (January 2016), pp. 117–130.

495 Dom and others, "The impact of the 2008 economic crisis on substance use patterns in the countries of the European Union".

496 Nagelhout and others, "How economic recessions and unemployment affect illegal drug use: a systematic realist literature review".

497 Dom and others, "The impact of the 2008 economic crisis on substance use patterns in the countries of the European Union".

498 Nagelhout and others, "How economic recessions and unemployment affect illegal drug use: a systematic realist literature review".

499 Seethalakshmi Ramanathan, Natarajan Balasubramanian and Rajeev Krishnadas, "Macroeconomic environment during infancy as a possible risk factor for adolescent behavioral problems", *JAMA Psychiatry*, vol. 70, No. 2 (February 2013).

500 Erin C. Strumpf and others, "Did the Great Recession affect mortality rates in the metropolitan United States? Effects on mortality by age, gender and cause of death", *Social Science and Medicine*, vol. 189 (2017), pp. 11–16.

In France, in a study conducted among 1,200 young adults, the experience of unemployment predicted an increase in the risk of cannabis use and abuse, in particular among individuals who had a low level of educational attainment and who may have had the lowest employment prospects.[501] Likewise, in Spain, the experience of unemployment has also been found to be associated with heavy cannabis use in both men and women.[502] There is also evidence that low income levels and poverty are associated with drug use behaviours, both in the general population[503] and in specific subgroups, as demonstrated in a study conducted among 1,000 people treated for tuberculosis in South Africa in which participants who were experiencing poverty were found to be more likely to have drug use disorders than those who were not.[504] For some individuals suffering from drug use disorders, declining income was linked to increased risky behaviour, such as injecting drug use[505] and engaging in criminal activities such as selling drugs.[506, 507]

The COVID-19 pandemic has not only affected overall economic growth but has also had a particularly severe impact on employment. By April 2020, full or partial lockdown measures, including workplace closures, had affected almost 2.7 billion workers, about 81 per cent of the global workforce. Over the whole of 2020, an estimated 8.8 per cent of global working hours were lost – equivalent to 255 million full-time jobs. This is approximately four times the hours lost during the global financial crisis of 2008. The situation improved towards the end of the 2020, although significant job losses were still noted in comparison with the same period in 2019.[507]

501 Maria Melchior and others, "Unemployment and substance use in young adults: does educational attainment modify the association?", *European Addiction Research*, vol. 21, No. 3 (April 2015).

502 Ester Teixidó-Compañó and others, "Differences between men and women in substance use: the role of educational level and employment status", *Gaceta Sanitaria*, vol. 32, No. 1 (January/February 2018), pp. 41–47.

503 Giuseppe Carrà and others, "Poverty matters: cannabis use among people with serious mental illness: findings from the United States Survey on Drug Use and Health, 2015", *International Journal of Social Psychiatry*, vol. 64, No. 7 (November 2018).

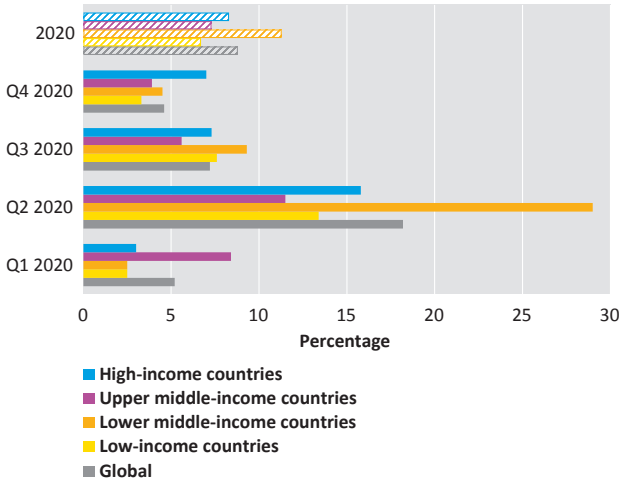
504 Goedele M. Louwagie, Edwin Wouters and Olalekan A. Ayo-Yusuf, "Poverty and substance use in South African tuberculosis patients", *American Journal of Health Behavior*, vol. 38, No.4 (May 2014), pp. 501–509.

505 Christian Ben Lakhdar and Tanja Bastianic, "Economic constraint and modes of consumption of addictive goods", *International Journal of Drug Policy*, vol 22, No. 5 (September 2011), pp. 360–365.

506 Arkes, "Recessions and the participation of youth in the selling and use of illicit drugs".

507 Arkes, "Does the economy affect teenage substance use?".

**FIG. 38 Working-hour losses, globally and by income group, 2020, total and quarterly estimates**




Source: International Labour Organization, "ILO Monitor: COVID-19 and the world of work: updated estimates and analysis, 7th ed. (January 2021).

According to the evidence available to date, lockdown measures, unemployment, stress, physical distancing, related isolation and boredom, and changes in the availability of certain substances have contributed to the changes observed in drug use behaviour. A protracted economic crisis, with lasting elevated levels of unemployment and economic uncertainty may solidify the trends observed during the pandemic, meaning that the increased prevalence of use of sedatives such as benzodiazepines and of cannabis may continue, at its higher level, and drug use disorders may be manifest at increased rates, too.

508 Full-time jobs assume a 48-hour working week. Change relative to the fourth quarter of 2019 (International Labour Organization, "ILO Monitor: COVID-19 and the world of work: updated estimates and analysis", 7th ed. (January 2021).

## Changes in drug market patterns that have accelerated during the COVID-19 crisis may continue at a higher rate once the pandemic is under control

### The trend towards the increased use of maritime and waterway trafficking routes and larger drug shipments may continue

The two major patterns of drug trafficking described in the an earlier chapter of the present booklet – the increased use of maritime and waterway trafficking routes and the interception of larger drug shipments – have been reported in many regions, suggesting that they were a ubiquitous response by drug traffickers to the pandemic, one which may persist after the pandemic. Establishing and using transcontinental maritime routes or transnational routes using waterways requires both time and well-organized networks, especially when drugs are trafficked alongside legal merchandise. It requires having people in the port of origin to assemble consignments and conceal tons of drugs in, for example, food company containers[509] and people to bribe customs officers if required. At the port of destination, or the final destination of the container, people are needed to receive the container, unpack the drugs and prepare them for onward transportation to their final destination.

Likewise, assembling multi-ton consignments and organizing their transportation along a route requires financial resources upfront, good logistics and sufficient capital reserves and/or sufficient profit margins to be able to absorb losses should drug consignments be intercepted.[510]

Large-scale transcontinental or transnational trafficking frequently involves organized crime, and the trend towards the increasing use of maritime routes has, even prior to the onset of the COVID-19 pandemic, raised concerns about the infiltration of logistical supply chains, shipping routes and large ports by organized crime groups.[511]

509 UNODC, Drugs Monitoring Platform.

510 Gautam Basu, Concealment, corruption, and evasion: a transaction cost and case analysis of illicit supply chain activity", *J Transp Secur 7 (2014), pp. 209–226.*

511 EMCDDA, *European Drug Report 2020*, (Luxembourg, Publications Office of the European Union, 2020).

The COVID-19 pandemic has been found to have provided opportunities for organized crime groups to expand their activities in legal markets and increase their infiltration of legal businesses. The crisis has increased the likelihood of struggling companies falling under the control of organized crime groups, as many companies have faced shortages of capital, caused by the closure or curtailment of their business activities.[512] Struggling firms that are not adequately supported by public subsidies are more likely to seek the liquidity offered by organized crime groups, putting them at increased risk of criminal infiltration.[513] There are also indications that organized crime groups have been able during the pandemic to continue to generate funds that are sufficient for expansion,[514] as some had already invested in sectors that have seen high demand during the pandemic, such as cleaning companies, the food industry and funeral homes.[515]

The pandemic may thus have created the potential for the establishment and consolidation of maritime trafficking routes, either purely out of convenience or because organized crime groups have consolidated networks that enable them to better infiltrate the legal maritime trade.

### Expanding markets for pharmaceutical drugs and cannabis

Economic contractions can induce greater demand for drugs because of the resulting unemployment or the need to escape stress and anxiety.[516] These stressors have been cited as the reasons behind the increasing demand for drugs such as cannabis, alcohol and prescription drugs, including benzodiazepines and tramadol, during the COVID-19 pandemic.[517] Changes in drug use and related behaviours may persist beyond the COVID-19 pandemic, with far-reaching consequences for drug markets.

512 UNDOC, "The impact of COVID-19 on organized crime".

513 Fabian Stephany and others, "Which industries are most severely affected by the COVID-19 pandemic? A data-mining approach to identify industry-specific risks in real-time", Working Paper, V 1.2 (March 2020).

514 Europol, "Pandemic profiteering: how criminals exploit the COVID-19 crisis" (March 2020).

515 Ernesto U. Savona and Michele Riccardi, eds., *Assessing the Risk of Money Laundering in Europe: Final Report of Project IARM* (Milano, Transcrime, Università Cattolica Sacro Cuore, 2017).

516 Bretteville-Jensen, "Illegal drug use and the economic recession: what can we learn from the existing research?".

517 Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

## Pharmaceutical drugs

A recent increase in non-medical use of benzodiazepines, both diverted pharmaceutical as well as novel compounds, has been observed in many drug markets in high-income countries.[518, 519] Data from a prescription delivery service in the United States showed a greater than 20 per cent increase in benzodiazepine prescriptions in the first month after COVID-19 was declared a pandemic, reversing a five-year downward trend in the data.[520] In Europe, increasing non-medical use of benzodiazepines was reported through the second half of 2020 by countries members of the European Union, with some attributing the increase to the greater psychological stress resulting from the pandemic.[521] If the changes in behaviour induced by the pandemic are lasting, demand for benzodiazepines may increase in the future, with broad implications for drug markets. An increase in benzodiazepine injecting has already been reported among some who illicitly source drugs in Europe and North America, which may be linked to diverted medications and increasing access to NPS benzodiazepines.[522]

Without adequate management, increases in the use of pharmaceutical drugs in the general population can also have negative long-term consequences. In North America, the experience of aggressively treating chronic non-cancer pain with opioid analgesics provides a key example of how the oversupply of prescription analgesics over a period of years left many saddled with an opioid-use disorder and shaped the demand for opioids in major illicit drug markets.[523] An increase in the prescription of pharmaceutical drugs such as benzodiazepines for treating anxiety or stress during the pandemic, if not grounded in the principle of rational prescription or if not properly managed, could result in greater problems in years to come.[524]

A growing demand for the non-medical use of benzodiazepines, as seen by increases in benzodiazepine injecting by those who use drugs purchased in illicit markets,[525] may be an early sign of a shift in demand in drug markets. A shift towards the use of illegally sourced or diverted benzodiazepines may have similar consequences to those observed in the North American opioid crisis. Although the opioid crisis in North America was initiated by the over-prescription of opioids for the treatment of pain, there has since been a shift towards illegally sourced opioids, including NPS synthetic opioid variants manufactured to circumvent drug control laws. In the context of benzodiazepines, the shift towards uncontrolled alternatives had already increased harms in some countries prior to the pandemic. In parts of Europe and North America, for example, diverted benzodiazepines are a concern,[526, 527] as distributors obtain NPS benzodiazepines, which fall outside existing control, and sometimes press them into tablets that are made to look like pharmaceutical-grade products.[528] Indeed, during the COVID-19 pandemic, there has been a notable increase in the share of overdose deaths in parts of North America involving NPS benzodiazepine compounds that fall outside international control.[529] In short, iatrogenic addiction or the diversion of benzodiazepines may reorient illicit drug markets in fundamental ways that could have lasting effects.

The interlinkage between medical and non-medical use of pharmaceutical drug may also affect those who have recovered from COVID-19. One recent study of COVID-19 patients in the United States who, although no longer contagious, were still experiencing health problems found that doctors were more likely to prescribe opioid analgesics and benzodiazepines in greater amounts to those with persistent COVID-19-related disabilities.[530] It is still unclear what share of COVID-19 patients exhibit long-term disabilities that require medications but, if not

518 See, for example, EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons (Luxembourg, Publications Office of the European Union, 2021)*.

519 Future Market Insights, "Injectable benzodiazepine market: 2020 analysis and review – injectable benzodiazepine market by drug class – diazepam, lorazepam, midazolam for 2020-2030", June 2020.

520 Express Scripts, "America's state of mind report", 16 April 2020.

521 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

522 Ibid.

523 Andrew Kolodny and others, "The prescription opioid and heroin crisis: a public health approach to an epidemic of addiction", *Annual Review of Public Health*, vol. 36, No. 1, pp. 559–574.

524 Ruchita Agrawal,"Careful prescribing of benzodiazepines during COVID-19 pandemic: a review", *Journal of Mental Health and Clinical Psychology*, vol. 4, No. 4 (2020).

525 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

526 EMCDDA, *Trendspotter briefing: Impact of COVID-19 on patterns of drug use and drug-related harms in Europe* (June 2021).

527 John Peppin and others, eds., *The Benzodiazepines Crisis* (Oxford, Oxford University Press, 2020).

528 Samuel Tobias and others, "Drug checking identifies counterfeit alprazolam tablets", *Drug and Alcohol Dependence*, vol. 218 (2021).

529 Canada, Ontario Drug Policy Research Network, "Preliminary patterns in circumstances surrounding opioid-related deaths in Ontario".

530 Ziyad Al-Aly, Yan Xie and Benjamin Bowe, "High-dimensional characterization of post-acute sequalae of COVID-19", *Nature* (2021), pp.1–8.

properly managed, some of those individuals may be at risk of iatrogenic addiction to opioids or benzodiazepines.

Likewise, use of tramadol could have increased during the pandemic. Strained health-care systems in some parts of the developing world may be treating COVID-19 symptoms or other related health issues, such as pain, with tramadol.[531, 532] Countries of Africa and the Middle East have seen a large growth in the availability of tramadol for non-medical use.[533] Should non-medical demand for pharmaceutical medications increase greatly, illegal distributors already have an illicit supply chain in place that can potentially be extended to meet new demand.

## Cannabis

COVID-19 may have accelerated the pre-existing trends towards increased use and availability of cannabis in some high-income countries as some people have turned to the drug to alleviate stress or manage boredom brought on by stay-at-home orders. This, in turn, may have opened up new opportunities for cannabis markets due to an emerging acceptance of the drug.[534]

Global information on changes in the prevalence of drug use during the pandemic is still not available. Thus, an examination of the overall extent of drug use has not yet been possible, but initial information that was available in early 2021, mainly in high-income countries, suggests that cannabis consumption has increased, probably more in terms of frequency of use than the number of people who use the drug. Regular users may have increased the quantity of cannabis they consume while infrequent users may have reduced their consumption of cannabis or abstained from consuming it.

The cannabis market is driven by frequent users.[535] So, even if infrequent users have reduced their consumption of cannabis and fewer people have used the drug during the pandemic, it is likely that the cannabis market continued to expand during the COVID-19 crisis, and that growth is likely to continue once the pandemic is over, as new patterns of use emerge, with heavier cannabis users driving those increases. The increasing acceptance of cannabis, as seen in the decreasing number of adolescents that perceive it as a risk,[536] could encourage this expansion. Accelerated rates of increase of cannabis use due to COVID-19 measures may further increase its accessibility and therefore provide both criminals and commercial operators, where the drug has been legalized, with an opportunity to expand their business. Indeed, large, multi-billion-dollar businesses, which have a private interest in the expansion of the cannabis use market, are moving into the market in the jurisdictions where cannabis has been legalized.[537]

## Innovations in retail distribution of drugs will persist if they prove efficient and have the potential to globalize drug markets

As the COVID-19 pandemic has forced businesses and individuals to adapt to a new reality of closures, mobility restrictions, distancing measures and lockdowns, many have turned to technology to overcome these challenges. Businesses have found ways to expand the delivery of their services, improve contactless and cashless trade, and cut costs through automation and restructuring.[538, 539] Individuals have used cell phone applications and other software to engage with the outside world, seek services and otherwise improve their lives at home.[540] Many of these technologies and services pre-dated COVID-19, but their adoption accelerated in 2020 and they are likely to continue to be used after the pandemic.

That adoption of technology to overcome the challenges imposed by the COVID-19 pandemic has extended to the illicit trade in drugs. Some of these developments, such as the adoption of Internet-based distribution, can

531 Nahla El-Ashmawy and others, "The plausible mechanisms of tramadol for treatment of COVID-19", *Medical Hypotheses*, vol. 146 (2021).

532 Salah N. El-Tallawy and others, "Pain management during the COVID-19 pandemic", *Pain and Therapy*, vol. 9, No. 2 (December 2020), pp. 453–466.

533 UNODC, *World Drug Report 2020*.

534 See the chapter on the impact on drug use of the present booklet.

535 UNODC, *World Drug Report 2019*, booklet 5, *Cannabis and Hallucinogens* (United Nations publication, 2019).

536 See booklet 3, *Drug Market Trends: Cannabis and Opioids*, of the present report.

537 UNODC, *World Drug Report 2020*.

538 Naveen Donthu and Anders Gustafsson, "Effects of COVID-19 on business and research", *Journal of Business Research*, vol. 117 (2020), pp. 284–289.

539 Crispin Coombs, "Will COVID-19 be the tipping point for the intelligent automation of work? A review of the debate and implications for research", *International Journal of Information Management*, vol. 55 (2020).

540 Karthikeyan Iyengar and others, "COVID-19 and applications of smartphone technology in the current pandemic", *Diabetes and Metabolic Syndrome Clinical Research and Reviews*, vol. 14, No. 5 (2020), pp. 733–737.

reshape how retail drug markets operate, making drugs more accessible.[541, 542, 543]

Drug markets had already started to adopt and adapt to technological developments before the pandemic in order to reduce production and distribution costs, including indirect costs related to the risk of seizure, arrest and prosecution.[544] Early reports suggest that drug markets have continued to adapt during lockdowns by extending contactless delivery services, online ordering through social media and encrypted messaging, and by mailing products to buyers.[545] Dynamic retail distribution can adapt to changing circumstances, and if these innovations can provide a comparative advantage beyond the COVID-related restrictions, they are likely to remain in place after the pandemic. Drug distribution, especially open-air or overt retailing, has declined during lockdown periods, a pattern that could persist well after the pandemic due to the adoption of new technologies that offer advantages to both buyers and sellers. Before the pandemic, buyers and sellers of drugs were already using social media, cell phones and delivery to transact,[546] but as practices shift towards modes of acquisition that favour privacy and convenience, buyers of drugs are likely to rely increasingly on these emerging technologies to locate drug dealers and have products delivered directly or hidden in deadrops, for example. For some consumers in some drug markets, this convenience could reduce non-monetary costs, such as search time or the risk of arrest.[547] Dealers may also prefer operating through Internet-based communication systems and delivery that are efficient and avoid legal risks or violence stemming from dealing drugs on the street.[548, 549, 550]

The use of darknet marketplaces may also expand as a result of the pandemic. Although barriers to accessing darknet marketplaces and cryptocurrency may remain for some of the most marginalized population groups, people who are more technologically savvy could find lucrative opportunities by bridging the gap for those who are less so, with far-reaching effects. A shift in drug acquisition, from street-level sales to online ordering and postal delivery, could lead to a globalization of retail drug markets that could reduce barriers to entry to the drug markets and increase competition between traffickers.

Internet-based sourcing enables anyone anywhere to trade in drugs, potentially altering and accelerating the expansion of drug markets. An enterprising individual living in an economically depressed area could, for example, obtain a wholesale amount of a drug online and distribute it to local consumers.[551, 552] As happens now in legal trade through global sale platforms, those who want to buy drugs in the future may no longer need to rely on local dealers to obtain them, as they could buy online drugs that can be shipped in a matter of days from another part of the globe. This could result in a greater diffusion of drug use. In general, drug markets now have national and regional characteristics, with certain substances dominating the use and supply of the market in different geographical locations, but if online selling becomes more widespread, any substance could become readily available anywhere. Internet-based trade in drugs that persists after the COVID-19 pandemic could reshape the local drug landscape, putting pressure on local dealers who have to compete with online suppliers who have lower cost structures as they can send drugs by mail for a modest fee.

541 Peter Reuter, "Systemic violence in drug markets", *Crime, Law and Social Change*, vol. 52, No. 3 (March 2009), pp. 275–284.

542 Thomas Friis Søgaard and others, "Ring and bring drug services: delivery dealing and the social life of a drug phone", *International Journal of Drug Policy*, vol. 69 (2019), pp. 8–15.

543 Mangai Natarajan, Ronald V. Clarke and Bruce D. Johnson, "Telephones as facilitators of drug dealing", *European Journal on Criminal Policy and Research*, vol. 3, No. 3 (1995), pp. 137–153.

544 Jonathan P. Caulkins, "Radical technological breakthroughs in drugs and drug markets: the cases of cannabis and fentanyl", *International Journal of Drug Policy* (2021).

545 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

546 Marcus A. Bachhuber and Raina M. Merchant, "Buying drugs online in the age of social media", *American Journal of Public Health*, vol. 107, No. 12 (December 2017), pp. 1858–1859.

547 Mark H. Moore, "Policies to achieve discrimination on the effective price of heroin", *The American Economic Review*, vol. 63, No. 2 (1973), pp. 270–277.

548 Silje Anderdal Bakken and Jakob Johan Demant, "Sellers' risk perceptions in public and private social media drug markets", *International Journal of Drug Policy*, vol. 73 (2019), pp. 255–262.

549 Jakob Demant and others, "Drug dealing on Facebook, Snapchat and Instagram: a qualitative analysis of novel drug markets in the Nordic countries", *Drug and Alcohol Rreview*, vol. 38, No. 4 (May 2019), pp. 377–385.

550 Leah Moyle and others, "#Drugsforsale: an exploration of the use of social media and encrypted messaging apps to supply and access drugs", *International Journal of Drug Policy*, vol. 63 (2019), pp. 101–110.

551 Judith Aldridge and David Décary-Hétu, "Hidden wholesale: the drug diffusing capacity of online drug cryptomarkets", *International Journal of Drug Policy*, vol. 35 (2016), pp. 7–15.

552 Michael Gilbert and Nabarun Dasgupta, "Silicon to syringe: cryptomarkets and disruptive innovation in opioid supply chains", *International Journal of Drug Policy*, vol. 46 (2017), pp. 160–167.

Globalization of retail markets could affect prices of some drugs if online retailers can undercut local dealers. In the short term, it is probably more realistic to expect that online retailing may remain limited to particular segments of the drug market that are perhaps more accessible to those who seek drugs such as cannabis and psychedelics, or casual users who can wait several days to receive a consignment of drugs sent by mail. Frequent users of heroin or cocaine may not have the means to obtain cryptocurrency, access darknet marketplaces or be able to wait for delivery and therefore may continue to rely on local dealers. That said, delivery services and cell phone-based ordering may continue to expand after the COVID-19 pandemic as buyers and sellers have found this innovation a convenient and efficient way to circumvent COVID-19-related restrictions, reduce waiting times and improve the efficiency of supply.

## Innovations in delivery of services to people who use drugs have created an opportunity for improving access and patient well-being in the long run

Mobility restrictions brought on by COVID-19 accelerated the adoption of new ways to deliver drug treatment and health services to people who use drugs. Abrupt social distancing orders and lockdowns forced many public services to adapt by finding innovative solutions in order to continue to provide outreach and health services to vulnerable drug-using populations. This is critically important as drug use during the pandemic may be increasingly harmful. Successes in service delivery innovations may create new opportunities for some people who use drugs by lowering barriers in accessing services, especially those that pertain to medication therapies or psychosocial services.

New policies and technological advances engendered by the COVID-19 crisis seem to have benefited individuals in drug treatment and others seeking to overcome social isolation and find support groups. Regulatory authorities in several regions have reduced barriers to accessing medication-assisted treatment, by increasing the flexibility of obtaining take-home doses of naloxone, methadone or buprenorphine or by permitting greater use of telehealth services.[553, 554, 555, 556] Experiences with a more flexible provision of opioid agonist therapy are being closely monitored with respect to the potential risk of diversion of the drugs to illicit markets and the potential increased coverage by services. Technological innovations, such as extended-release depots for buprenorphine and remote electronic dispensing machines for methadone, are promising means of extending treatment delivery services without increasing the risk of diversion.[557] Such flexibility, if it results in greater access to services without bringing unwanted consequences, could persist after social distancing measures are lifted and could be adapted to deliver services in more remote areas. To date, emerging evidence suggests that increased flexibility in providing opioid agonist therapies during the COVID-19 pandemic, such as methadone and buprenorphine, has not resulted in increases in drug-related harms, such as overdose, but has increased access to these medications.[558]

While telemedicine is not new, it has been extended during the pandemic to link patients with providers or other support groups using digital technology.[559, 560] Patients and practitioners alike have generally found these technologies easy and convenient to use, and some believe that telemedicine will continue to play a role in substance use disorder treatment after the end of the

553 United States, Substance Abuse and Mental Health Services Administration, "Provision of methadone and buprenorphine for the treatment of opioid use disorder in the COVID-19 emergency" (April 2020).

554 EMCDDA, COVID-19 resources page, "COVID-19 resources page for people who use drugs (PWUD) and drug service providers in the early phase of the COVID-19 pandemic".

555 EMCDDA, *Impact of COVID-19 on Drug Markets, Use, Harms and Drug Services in the Community and Prisons*.

556 Debasish Basu and others, "Opioid substitution therapy with buprenorphine-naloxone during COVID-19 outbreak in India: sharing our experience and interim standard operating procedure", *Indian Journal of Psychiatry*, vol. 62, No. 3 (May/June2020), pp. 322–326.

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COVID-19 pandemic.[561, 562] However, many of these technologies are still inaccessible to the most vulnerable and marginalized of people who use drugs, some of whom present other co-occurring diagnoses, which may limit the effectiveness of those technologies or exacerbate inequalities in service provision.[563, 564, 565] Other innovations have been targeting harder-to-reach populations, for example, mobile van service delivery outreach programmes, which seek to reduce barriers to access in certain drug-using populations who cannot avail themselves of more formalized or insurance-based treatment programmes.[566] Nonetheless, expanding treatment through such innovative means and increasing flexibility after the end of the pandemic may benefit many treatment-seeking patients.

Blended services that are aimed at mutual optimization of face-to-face and online therapies may have utility beyond the COVID-19 pandemic and contribute to increased access to services. Thus, the forced adaptation of new approaches that were implemented during the pandemic may trigger or accelerate research that identifies science-based drug treatments that use new technologies, such as telemedicine, or greater flexibility in the provision and delivery of medication therapies. If grounded on ethical standards that respect privacy and confidentiality, it is possible that contactless delivery and outreach tools ensure patient privacy and reduce stigma.

Should some or all of these innovations prove to be safe and effective, and become mainstays after the end of the COVID-19 pandemic, it is likely that the reductions in barriers to access could improve patient health. Limitations in obtaining agonist medications or logistical barriers that require in-person therapies could be reduced through the use of technological and policy adaptations. In short, the situation created by the COVID-19 pandemic may prove to be of great benefit in the future, leading to adaptations in the provision of drug treatment services that would otherwise not have happened in the short term due to political or logistical constraints.

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# GLOSSARY



*amphetamine-type stimulants* — a group of substances composed of synthetic stimulants controlled under the Convention on Psychotropic Substances of 1971 which includes amphetamine, methamphetamine, methcathinone and the "ecstasy"-group substances (3,4-methylenedioxymethamphetamine (MDMA) and its analogues).

*amphetamines* — a group of amphetamine-type stimulants that includes amphetamine and methamphetamine.

*annual prevalence* — the total number of people of a given age range who have used a given drug at least once in the past year, divided by the number of people of the given age range, and expressed as a percentage.

*coca paste (or coca base)* — an extract of the leaves of the coca bush. Purification of coca paste yields cocaine (base and hydrochloride).

*"crack" cocaine* — cocaine base obtained from cocaine hydrochloride through conversion processes to make it suitable for smoking.

*cocaine salt* — cocaine hydrochloride.

*drug use* — use of controlled psychoactive substances for non-medical and non-scientific purposes, unless otherwise specified.

*fentanyls* — fentanyl and its analogues.

*new psychoactive substances* — substances of abuse, either in a pure form or a preparation, that are not controlled under the Single Convention on Narcotic Drugs of 1961 or the 1971 Convention, but that may pose a public health threat. In this context, the term "new" does not necessarily refer to new inventions but to substances that have recently become available.

*opiates* — a subset of opioids comprising the various products derived from the opium poppy plant, including opium, morphine and heroin.

*opioids* — a generic term that refers both to opiates and their synthetic analogues (mainly prescription or pharmaceutical opioids) and compounds synthesized in the body.

*problem drug users* — people who engage in the high-risk consumption of drugs. For example, people who inject drugs, people who use drugs on a daily basis and/or people diagnosed with drug use disorders (harmful use or drug dependence), based on clinical criteria as contained in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) of the American Psychiatric Association, or the *International Classification of Diseases and Related Health Problems* (tenth revision) of WHO.

*people who suffer from drug use disorders/people with drug use disorders* — a subset of people who use drugs. Harmful use of substances and dependence are features of drug use disorders. People with drug use disorders need treatment, health and social care and rehabilitation.

*harmful use of substances* — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a pattern of use that causes damage to physical or mental health.

*dependence* — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a cluster of physiological, behavioural and cognitive phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

*substance or drug use disorders* — referred to in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) as patterns of symptoms resulting from the repeated use of a substance despite experiencing problems or impairment in daily life as a result of using substances. Depending on the number of symptoms identified, substance use disorder may be mild, moderate or severe.

*prevention of drug use and treatment of drug use disorders* — the aim of "prevention of drug use" is to prevent or delay the initiation of drug use, as well as the transition to drug use disorders. Once a person develops a drug use disorder, treatment, care and rehabilitation are needed.

# REGIONAL GROUPINGS



The *World Drug Report* uses a number of regional and subregional designations. These are not official designations, and are defined as follows:

## AFRICA

- East Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania and Mayotte
- North Africa: Algeria, Egypt, Libya, Morocco, Sudan and Tunisia
- Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe and Reunion
- West and Central Africa: Benin, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo and Saint Helena

## AMERICAS

- Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Anguilla, Aruba, Bonaire, Netherlands, British Virgin Islands, Cayman Islands, Curaçao, Guadeloupe, Martinique, Montserrat, Puerto Rico, Saba, Netherlands, Sint Eustatius, Netherlands, Sint Maarten, Turks and Caicos Islands and United States Virgin Islands
- Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama
- North America: Canada, Mexico, United States of America, Bermuda, Greenland and Saint-Pierre and Miquelon
- South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela (Bolivarian Republic of), Falkland Islands (Malvinas) and French Guiana

## ASIA

- Central Asia and Transcaucasia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
- East and South-East Asia: Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Viet Nam, Hong Kong, China, Macao, China, and Taiwan Province of China
- South-West Asia: Afghanistan, Iran (Islamic Republic of) and Pakistan
- Near and Middle East: Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen and State of Palestine
- South Asia: Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka

## EUROPE

- Eastern Europe: Belarus, Republic of Moldova, Russian Federation and Ukraine
- South-Eastern Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia, Romania, Serbia, Turkey and Kosovo[1]

1 References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).

- Western and Central Europe: Andorra, Austria, Belgium, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, Holy See, Faroe Islands and Gibraltar

## OCEANIA

- Australia and New Zealand: Australia and New Zealand
- Polynesia: Cook Islands, Niue, Samoa, Tonga, Tuvalu, French Polynesia, Tokelau and Wallis and Futuna Islands
- Melanesia: Fiji, Papua New Guinea, Solomon Islands, Vanuatu and New Caledonia
- Micronesia: Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Guam and Northern Mariana Islands

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UNODC Research

Consisting of five separate booklets, the *World Drug Report 2021* provides an in-depth analysis of the global drug markets and paints a comprehensive picture of the measurable effects and potential impact of the COVID-19 crisis on the world drug problem.

Booklet 1 summarizes the four subsequent booklets by reviewing their key findings and highlighting their policy implications. Booklet 2 offers a projection of the impact of population growth on drug use by 2030 and gives a global overview of the supply of and demand for drugs, including their health impact and the trafficking of substances over the Internet. Booklet 3 provides an analysis of the global markets for cannabis and opioids, both in terms of supply and use, and includes an overview of the latest developments in countries with measures regulating the non-medical use of cannabis; it also discusses the overlaps between the various opioids and looks at access to pharmaceutical opioids for medical use. Booklet 4 contains the latest trends in and estimates of the markets for stimulants – cocaine, methamphetamine, amphetamine and "ecstasy" – both at the global level and in the most affected subregions. Booklet 5 presents an early assessment of the impact of the COVID-19 pandemic on drug markets by looking at how it has affected drug supply and demand dynamics, including in terms of health consequences and how drug service provision has adapted to the new situation in many countries; the booklet closes with a look at how the pandemic may influence long-term changes in the drug markets.

The *World Drug Report 2021* is aimed not only at fostering greater international cooperation to counter the impact of the world drug problem on health, governance and security, but also, with its special focus on the impact of the COVID-19 pandemic, at assisting Member States in anticipating and addressing challenges that may arise in the near future.

The accompanying statistical annex is published on the UNODC website:
www.unodc.org/unodc/en/data-and-analysis/wdr2021.html

ISBN: 978-92-1-148361-1